

FOREWORD

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The business world is changing faster than ever and the pace of change has never been this fast. In the blink of an eye things change with devastating implications for business. On 25 November 2021 for example scientists in South Africa identified a new Corona virus strain and by 27 November over 30 countries have banned travel to and from South Africa resulting in a scramble to cancel travel arrangements and change holiday and other arrangements. Businesses in all sectors can and will feel the impact of these decisions showing once again how quickly things can change. Added to this is the fast pace of change in technology as new technologies are coming out daily impacting on the habits, preferences and loyalties of consumers. All these aspects have an impact on businesses and this requires businesses to change the way they do things- if they still want to be there tomorrow!

In the FMCG and retail space there are a number of aspects that impact on the retail and marketing environment but maybe the three key aspects of note are the following:

- Store visits have dropped. Due to the uncertainty regarding covid and a general uncertainty amongst shoppers the number of shopping trips have dropped significantly. People are more likely to make less trips to the stores than previously.
- Buying bigger volumes. Fewer trips to the store inevitably led to bigger baskets. This is attributed to amongst others a fear of exposure in stores as well as a fear of out of stock items in times of lockdown. Consumers want to be prepared and not be caught napping in the case of sudden new restrictions.
- Changing target markets. The lower income groups who used to do their shopping daily or very frequently (when they have money) also adapted to the changing business environment. Their number of shopping trips declined, and this can partially be attributed to less work and less income.

The implications of these changes are that consumers have become more cautious regarding their expenditure, what they spend it on and relying more on well-known brands to ensure reliability and trust. Consumers are also swapping stores – and loyalty – due to restricted movement aspects. Consumers who are restricted in their movements are more likely to look for better deals – price wise- resulting in buying in bulk more readily. It is clear that the marketing landscape has changed and that these changes will have a profound effect on how people shop in the future. Marketers need to be aware of these changes and adapt their strategies more and more in line with these changes in consumer buying behaviour.

The Role of Information-Sharing on Supply Chain Resilience: A Study in the South African Retail Industry

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ABSTRACT

Background: Retail firms are operating in an increasingly tumultuous global economy, with extended supply chains and ever-increasing customer demand. Retail firms also face heightened vulnerability towards disruptions and disasters that could bring their supply chain to a complete standstill. Building a resilient supply chain and being able to share critical information, is essential to a retail firm's survival and success.

Objectives: The purpose of this study is to investigate the role of information-sharing on supply chain resilience (SCRES), within buyer-supplier relationships in the South African retail industry. More specifically, the role of information-sharing on the pillars of SCRES, namely, flexibility, visibility, velocity and efficiency, were investigated.

Method: A generic qualitative research design was implemented. Data were collected by conducting 13 semi-structured interviews with both buyer and supplier firms operating in the South African retail industry.

Results: The study's findings indicate that the antecedents of resilience can be achieved through the sharing of accurate and timely information. The results suggest that retail firms acknowledge the urgency of building resilient supply chains to enable them to mitigate the impact of an extremely disruptive economic business environment. Retail firms with close and open customer and supplier relationships achieved a higher degree of information-sharing and faster response times to disruptions and market fluctuations. Retail firms that share information can foresee and respond to disruptive events better, and before they become catastrophic, providing them with a competitive advantage.

Keywords: Supply chain resilience, disruptions management, information-sharing, qualitative research, South Africa, retail industry

INTRODUCTION

Elizabeth Edwards, former American attorney and best-selling author was quoted saying: "Resilience is accepting your new reality, even if it's less good than the one you had before. You can fight it, you can scream about what you've lost, or you can accept it and try to put together something good." Similarly, every day, retail firms are faced with

potential disruptions which can potentially disrupt their capability to perform effectively (Gölgeci & Kuivalainen 2020, 63). As such, many retail firms have acknowledged the urgency of building a resilient supply chain to enable them to mitigate the impact of an extremely disruptive economic or environmental event (Sabahi & Parast 2019, 2; Ambulkar, Blackhurst & Grawe 2015, 111).

Supply chain disruptions and disasters may originate externally or from internally within the firm (Ivanov, Sokolov & Dolgui, 2014:2155). However, the extent of the supply chain disaster and the vulnerability can increase as retail firms attempt to erroneously or reactively respond to the disruptions (Ekanayake, Shen, Kumaraswamy & Owusu 2020, 1; Kembro & Selviaridis 2015, 4). Even though disruptions in supply chains can be catastrophic, it remains under-researched, as most retail firms only focus on developing practices to eliminate supply chain interruptions, however, despite their best endeavours, not every supply chain disruption can be planned for nor eliminated (Melnik, Closs, Griffis, Zobel & Macdonald 2014, 37). The COVID-19 pandemic has affected the global economy, unlike any other disruptive event in recent years.

However, even though COVID-19 is perhaps an unparalleled example, it has clearly shown the significance that in cases of extraordinary disruptive events, SCRES to disruptions needs to be considered at the scale of survivability or viability to avoid supply chain and market collapses and the severe need for additional SCRES research, practices and strategies (Ivanov & Dolgui 2020, 1). Tukamuhabwa, Stevenson, Busby, and Zorzini (2015, 5600) posit that SCRES is based on four 'pillars', namely, flexibility, visibility, velocity and efficiency.

Concomitantly, all of these antecedents share one critical element, information-sharing (IS) (Colicchia, Creazza, Noè & Strozzi 2019, 5, Mandal, Sarathy, Korasiga, Bhattacharya & Dastidar, 2016, 548). Without IS capabilities between supply chain partners retail firms will not be able to cope with supply chain disasters and disruptions (Wong, Lirn, Yang & Shang 2019, 2). According to Meyer, Niemann, Uys and Beetge (2019, 1), South African retail firms are even more vulnerable to disasters and disruptions due to its unique socio-economic factors such as a high degree of labour unrests, strikes and inflexible labour policies, high unemployment rates and intense market competition.

Furthermore, the South African retail sector ranks as the sixth-largest sector that contributes to economic growth and employment in South Africa (Jacobs 2018, 3). As such, managing retail sales is crucial as retailers face extreme competition through globalisation and potential internal and external vulnerabilities (Aye, Balcilar, Gupta & Majumdar 2015, 66). Additionally, South African consumers are becoming more informed and sensitive to their consumption behaviour and the environmental effects thereof, forcing retail firms to seek more sustainable and resilient ways of conducting business (Dos Santos, Svensson & Padin 2013, 104). Therefore, in line with the above, the purpose of this qualitative study was to explore how IS influences SCRES of retail firms in the South African retail industry, by investigating SCRES and its underlying mechanisms namely, flexibility, visibility, velocity and efficiency. The following research questions guided the study:

- How does IS increase the flexibility of SCRES?
- How does IS increase the visibility of SCRES?
- How does IS increase the velocity of SCRES?
- How does IS increase the efficiency of SCRES?

This study makes specific theoretical and managerial contributions. Firstly, after a review of extant literature, the role of IS in SCRES has not been investigated in a South African retail context. Secondly, Xu, Zhang, Feng & Yang (2020, 1-19) conducted a comprehensive bibliometric analysis on supply chain disruption risks based on 1 310 publications published between 1999 and 2019 and indicated future research should build new perspectives from a contextual and methodological perspective. This study responds to this call of Xu et al. (2020, 15) as well as Dubey, Gunasekaran, Childe, Fosso Wamba, Roubaud and Foropon (2019, 13) as it was conducted in a developing country perspective and employed a qualitative methodology to gain a more in-depth insight into the phenomenon of SCRES. Furthermore, this study may add insights to South African retail managerial practices by presenting a better understanding of how IS benefits SCRES. This could lead to better decision-making by practitioners and, ultimately, improve firm performance and profitability.

LITERATURE REVIEW

INFORMATION-SHARING AND THE SOUTH AFRICAN RETAIL INDUSTRY

Retailers usually have strong intimate relationships with their suppliers due to the importance of on-time deliveries and supply chain efficiencies (das Nair 2018, 320). The South African retail industry consists of many retail firms with many different types of stores and retail offerings (Jacobs 2018, 10). The network view of supply chains can explain interdependencies as well as the difficulties inherent in sharing information across multiple supply chain tiers in retail supply chains (Kembro 2015, 456). IS between supply chain partners allows them to understand one another better, reducing the risk of miscommunication, misinterpretation of agreements and the dangers of using inaccurate information (Wu, Chuang & Hsu 2014, 125).

Instant benefits of IS include improved forecasts and the reduction of inventory levels (Kembro & Selviaridis 2015, 455). Continuous IS with supply chain partners has potential benefits, including better-coordinated processes and superior supply chain planning (Kembro & Selviaridis 2015, 455). Improved IS leads to faster response times, encourages flexibility and agility, lowers costs and reduces the bullwhip effect (Panahifar, Byrne, Salam & Heavey 2018, 360). The bullwhip effect explains how upstream partners are unable to forecast demand correctly, as they base their forecasts on inaccurate, dated and incomplete information, resulting in non-optimal production and supply decisions (Kembro & Selviaridis 2015, 456). To mitigate shortages in supply, supply chain members are forced to keep higher levels of inventory, thereby reducing their profit margins (Wu et al. 2014, 122).

Past research has shown that the sharing of information across the various levels in a supply chain could bring about improved decision making among managers (Kembro & Selviaridis 2015, 456; Wu et al. 2014, 122). However, this holds significant challenges for retail firms as it requires high levels of commitment and trust between the supply chain members (Soosay & Hyland 2015, 613). Retail firms actively participating in a high trust relationship are more willing to share information and experience in collaborative practices (Meyer, Niemann & Kotzé 2017, 1; Wu et al. 2014, 124). Online IS helps coordinate the material, information and financial flows between supply chain members but may be challenging to implement (Kembro & Selviaridis 2015; Wu et al. 2014, 123). The quality of information is a significant concern as inaccurate information has no value (Kembro 2015, 457). Other barriers include the risk of only one partner benefitting from the sharing of confidential information and the risk of devaluing knowledge when sharing it with partners that do not possess the required capabilities (Kembro 2015, 457). IS and effective communication, before the occurrence of an unfortunate event, can be seen as a proactive strategy in achieving resilience (Tukamuhabwa et al. 2015, 5601).

SUPPLY CHAIN RESILIENCE

SCRES is defined as the ability of retail firms to quickly adapt to and recover from shocks and other stressful events such as droughts, violence, natural disasters and conflicts (Gligor, Esmark & Holcomb 2015, 71; Scholten & Schilder 2015, 471). Akkermans and Wassenhove (2018, 64) drew a parallel between ecological tsunamis and supply chain tsunamis. Tsunamis are specifically used to illustrate that supply chain disruptions occur over an extended period as a consequence of a series of events and should not be considered as isolated incidents. Resilience, as a resultant research topic, is of growing importance due to an increase in supply chain complexity and disruptions originating from global sourcing, operations and lean supply chain practices (Botes, Niemann & Kotzé 2017, 184). As mentioned, Tukamuhabwa et al. (2015, 5600) postulate that SCRES is based on four 'pillars', namely, flexibility, visibility, velocity and efficiency which will be discussed in the subsequent sections.

Flexibility

The ability to adapt and respond quickly and effectively is of great importance for today's international supply chains, challenged with extensive complexity (Tiwari, Tiwari & Samuel 2015, 768). According to Tiwari et al. (2015, 771), a supply chain can be described as flexible "if it can ensure smooth undisrupted supply of the products from the supplier to the end-user under all risks and uncertainties in the environments, with the least variation in the difference between the demand and supply at every demand-supply node, and without much penalty or impact on the SC

resources and the costs incurred". Flexibility enables retail firms to deal with high levels of uncertainty by adapting to disruptions in the supply chain as well as enabling the coordination of processes among firms and provides support to them in managing uncertainty (Scholten, Sharkey Scott & Fynes 2014, 215). Supply chain flexibility is increased through collaboration and can be related to a firm's systems, their products and their processes. Flexibility can be created through various practices, including adjourning work to a future date to cope with a disruption in supply, recruiting various suppliers, cross-training staff, deploying multi-purpose equipment and making use of temporary staff or employment agencies (Tukamuhabwa et al. 2015, 5604).

Several trade-offs relative to flexibility exist, including cost, uncertainty, controllability and efficiency (Tiwari et al. 2015, 781). Fiksel, Polyviou, Croxton & Pettit (2015, 85) and Rajesh (2016, 42) identified flexibility, particularly flexibility in sourcing, manufacturing and order fulfilment, as one of the necessary capabilities that a firm must have to be resilient. Flexible firms have a multi-skilled workforce that can modify their delivery schedules and operations to produce different types of products, thereby improving their ability to adapt to unforeseen events (Scholten & Schilder 2015, 472).

Visibility

Given the speed at which information and communication technologies and cloud-based computing are developing, visibility is becoming mandatory for firms striving for prosperity (Handfield & Linton 2017, 81). Visibility is defined as the capability with which a firm can establish how materials and information flow through the entire supply chain, from the primary supplier to the end customer (Handfield & Linton 2017, 81). Additionally, visibility refers to the ability to see the end-to-end pipeline by having access to key operational and managerial information and relates to the capability of the central firm to access and share information related to supply chain partners' strategies and operations (Caridi, Moretto, Perego & Tumino 2014, 2).

The sharing of timely and accurate information between buyers and suppliers is essential in creating visibility in a supply chain (Botes et al. 2017, 191). Moreover, visibility signifies that important information is readily available to the individuals that need it, whether inside or outside the firm, for supervising, controlling and altering the supply chain strategy and operations (Caridi et al. 2014, 2). Nooraie and Parast (2015, 192) posit that by permitting complete visibility in an integrated supply chain network, any factors which may lead to disruptions in the supply chain can be identified and resolved before they reach a critical stage. Visibility also enables an improvement in the timing and quality of decisions as possible interruptions are identified and addressed, from various perspectives early on (Tukamuhabwa et al. 2015, 5605).

Velocity

According to Botes et al. (2017, 185), velocity is the speed in which a firm's supply chain reacts to a disruption. Velocity emphasises the need for supply chain's to be efficient in their response to, and recovery from, unfortunate events (Scholten & Schilder 2015, 472). Given the inverse relationship between capital and inventory, velocity is considered an asset, since inventory moves towards the end market at a greater pace and capital becomes available sooner (Handfield & Linton 2017, 81). Other benefits of velocity include higher-income resulting in higher profits and a reduction in product obsolescence (Handfield & Linton 2017, 81). Véronneau and Roy (2014, 359) introduced a concept called security at the source, which is fundamental in increasing supply chain velocity.

Firms must implement screening security to prevent bottlenecks and inefficiencies that may impair supply chain efficiency and velocity (Véronneau & Roy 2014, 360). According to Hofmann (2017, 5110), velocity is the ability of a firm to process information at high speed. When firms take advantage of real-time information, they will be able to recognise and respond to changes in patterns and events and implement viable strategies (Hofmann 2017, 5110). When information is made available from both the buyer and the supplier, it possesses velocity and variety capabilities (Kaur & Singh 2018, 301). These velocity capabilities include the ability of data to adapt to real-time situations and respond to newly occurring events (Kaur & Singh 2018, 304). Utilising this available data effectively leads to a resilient and sustainable supply chain (Kaur & Singh 2018, 301).

Efficiency

Uncertainty is one of the greatest challenges faced by today's modern supply chains; therefore, it is necessary to view and understand it from both a flexible and efficient perspective (Ivanov et al. 2014, 21). When production or delivery information is shared across the supply chain, it enables enhanced coordination of resources, roles and activities, thereby boosting operational efficiency (Wu et al. 2014, 124). There is a direct link between agility and efficiency as agile supply chains can respond to disruptions in a cost-efficient manner, thereby increasing efficiency (Gligor et al. 2015, 73). IS between supply members enable improved efficiency by improving the firm's processes, lowering inventory levels, increasing throughput and reducing manufacturing costs (Wu et al. 2014, 124-125).

To balance efficiency in a firm, safety stock is required to act as a buffer when disruptions occur (Scholten et al. 2014, 214). The high level of complexity involved when firms distribute information, money or materials, is a key source of supply chain disruptions and reduces supply chain efficiency (Bode 2015, 215). Firms tend to focus more on increasing efficiency and responsiveness to mitigate supply chain disruptions, but they fail to consider supply risk (Bode 2015, 215). Their focus is on the solution and not the root cause of the problem. However, firms should design their supply chains in a way that will reduce the frequency of disruptions and, at the same time, increase efficiency and responsiveness (Bode 2015, 224).

METHODOLOGY

GENERAL DESCRIPTION OF THE PROPOSED RESEARCH DESIGN

A generic qualitative research design was used for this study. It is described as the collection of individuals' own experiences and perceptions of events (Kahlke 2014, 39). A qualitative research approach was adopted as the researchers draw concepts and insight from data as opposed to using data to test a preconceived hypothesis (Taylor, Bogdan & DeVault, 2015, 7). As such, the researchers were able to deduce results based on a full understanding of the context in which disruptions took place, along with a thorough understanding of how managers made use of information to mitigate and prevent the unfortunate consequences of such disruptions. The participants' opinions and sentiments were collected through 13 semi-structured interviews, and the interview guide was modified during the data collection process.

SAMPLING DESIGN

South African retail firms were the unit of analysis. Homogeneous sampling was used to identify the retail firms as the retail firms had to have similar characteristics in terms of their businesses and experiences. Additionally, purposive sampling techniques (Roy 2015, 244) were used to identify the supply chain managers from the respective retail firms. The chosen participants adhered to the following eligibility criteria: (1) The firm had to operate in South Africa and (2) it had to be in the retail industry. The individual participants' inclusion criteria were as follow: (1) Have at least five years' experience in the supply chain industry and (2) had to be present during a supply chain disruption that took place in their firm. These inclusion criteria were made to ensure that rich and accurate data of the research questions could be gathered. A profile of the study participants is provided in Table 1.

**TABLE 1:
A PROFILE OF THE STUDY'S PARTICIPANTS**

Pseudonym	Position	Firm	Length of interview (minutes)
P1	Human Resource and Sales Director	F1	28
P2	Senior Buyer and Office Manager	F2	20
P3	Technical Sales Representative	F3	18
P4	DC Manager	F4	59
P5	Logistics Executive	F5	25
P6	Procurement Manager	F6	35
P7	Chief Operating Officer	F7	44
P8	Director	F8	14
P9	Head of Division of Non-Edible	F9	23
P10	National Operational Manager	F10	21
P11	Managing Director	F11	28
P12	Debtor and Sales Manager	F12	16
P13	Financial Manager	F13	17

The average duration of interviews (min) 26.76

Source: Authors' own compilation

DATA COLLECTION

13 semi-structured interviews were the primary source of data, collected for this research study. Ten interviews were face-to-face, and three were conducted telephonically due to geographical constraints. The discussion guide was deliberately open-ended to ensure that the participant gave answers based on their interpretation and to safeguard against a situation in which participants were restricted or guided by the interviewer (Alshenqeeti 2014, 39). The interviews were transcribed by the researchers and verified for accuracy by listening to the audio recordings. A pre-test was conducted before the primary data collection. No significant changes needed to be made to the discussion guide. The pre-test participant complied with the inclusion criteria previously identified and was used as part of the main study. Interview duration varied between 13 and 59 minutes, depending on the level of detail with which the participants answered the questions.

DATA ANALYSIS

The raw data were analysed using the thematic approach as it is a well-known and utilised approach when analysing qualitative data (Nowell, Norris, White & Moules 2017, 2). Thematic analysis is used to “identify, analyse, organise, describe and report themes” found in the data collected (Castleberry & Nolen 2018, 808). Priori codes were identified, based on the study’s research questions, to build a master code list that guided the data analysis. This research utilised a computer-assisted qualitative data analysis (CAQDAS) software package called Atlas.ti (version 8) to efficiently analyse the large amounts of data from the interviews. Atlas.ti is specifically developed to generate and manage codes as well as identify the relationship between codes and themes. All researchers were involved in the data coding process, thereby enhancing the trustworthiness of the research study since the researchers constantly re-evaluated the perspectives and thought processes of one another.

ETHICAL CONSIDERATIONS

This study was approved by the Research Ethics Committee of the Faculty of the Economic and Management Sciences at a South African university. Before each interview, each study participant signed the consent form in which they acknowledged that they were aware that their participation was voluntary, anonymous, confidential and could be terminated at any time. In the case of the three telephone interviews, the participants were emailed the consent form, which they printed, signed, scanned and sent back. Pseudonyms were assigned to each participant and firm to ensure further anonymity and confidentiality in the study.

TRUSTWORTHINESS

Trustworthiness is defined as the degree to which the study results are a true representation of the real-life experience of the participants to the specific topic under investigation (Curtin & Fossey 2007, 88) and is described by four trustworthiness criteria namely credibility, transferability, dependability and confirmability. Credibility refers to the extent to which the results of the study are representative of what the participants “think, feel and do” (Lietz & Zayas 2010, 191). To ensure credibility, peer briefings and member checks were conducted in which the participants were asked probing questions (Bloomberg & Volpe 2018, 162). Transferability refers to the extent to which the results of a research study can be valuable or meaningful to researchers in countries and industries other than the country and industry in which it was originally conducted (Connelly 2016, 435-436).

For transferability, the researchers made sure to select the retail firms based on the inclusion criteria and documented them in detail (Polit & Beck 2012, 585). Dependability refers to the reliability of the data, along with the changing circumstances in which the research study is conducted (Connelly 2016, 435). For dependability, all the records, transcriptions and correspondence were kept safe as well as independent researchers who peer-reviewed the data (Lietz & Zayas 2010, 195). Confirmability relates to removing any preconceptions, experiences, perceptions, opinions and motivations of the researchers, thereby ensuring that the results only reflect the participants’ point of

view (Shenton 2004, 72). The researchers made sure to adhere to confirmability through research reflexivity, open-ended questions, and complete transcriptions (Connelly 2016, 435).

FINDINGS

Four main themes (based on the pillars) of SCRES were used to guide the study. The sub-themes and the frequency of the codes identified during data analysis are presented in Table 2.

TABLE 2
FREQUENCY TABLE OF THE MAIN THEMES, SUB-THEMES AND CODES

	Flexibility			Visibility			Velocity		Efficiency	
Participants	Demand measures	Order fluctuations	Disruption response	Quality measures	Suppliers capabilities	Tracking flows	Response times	Disruption recovery time	Financial impact	Safety stock
P1	x	x	-	-	-	x	x	x	-	x
P2	x	-	x	-	-	x	x	x	-	-
P3	x	-	x	-	-	x	x	x	x	-
P4	x	x	x	-	x	x	x	x	x	x
P5	x	x	-	x	x	x	x	x	x	x
P6	x	x	x	x	x	x	x	-	-	x
P7	-	x	x	x	x	x	x	x	x	-
P8	x	-	-	x	x	x	-	x	-	x
P9	x	x	-	x	x	x	x	-	x	-
P10	x	x	-	x	x	x	x	x	x	-
P11	x	x	x	x	x	x	x	x	-	x
P12	x	x	x	-	-	x	x	-	-	-
P13	-	x	x	-	-	-	x	x	x	-
Total	11	10	8	7	8	12	12	10	7	6

Source: Authors' own compilation

SUPPLY CHAIN RESILIENCE

Flexibility

The three main indicators of flexibility in retail firms were identified as demand measures, order fluctuations and disruption responses.

Eleven of the 13 participants indicated that they have demand measures to anticipate and stay up to date with customer requirements and needs, which increases flexibility. This strengthens the literature stating that a supply chain is flexible when it can ensure the undisrupted flow of materials, information and financials, with least variation between demand and supply when uncertainties occur (Tiwari et al. 2015, 771).

“...we have got continuous product research... we’re continuously looking for new suppliers. We continuously looking for the latest technology. We spend a lot of time prototyping things and we ask our suppliers to create new concepts and to come up with new concepts of products for us, so we do that to keep up to date. And then also with customers, customer visits are very vital when we go on-site to customers and then we will look at their challenges...” (P11, Female, Managing Director).

Ten of the 13 participants stated that they have processes in place to manage significant order fluctuations to maintain operational flexibility. This agrees with the literature which states that flexibility in sourcing, operations and order fulfilment is essential to create SCRES (Rajesh 2016, 42).

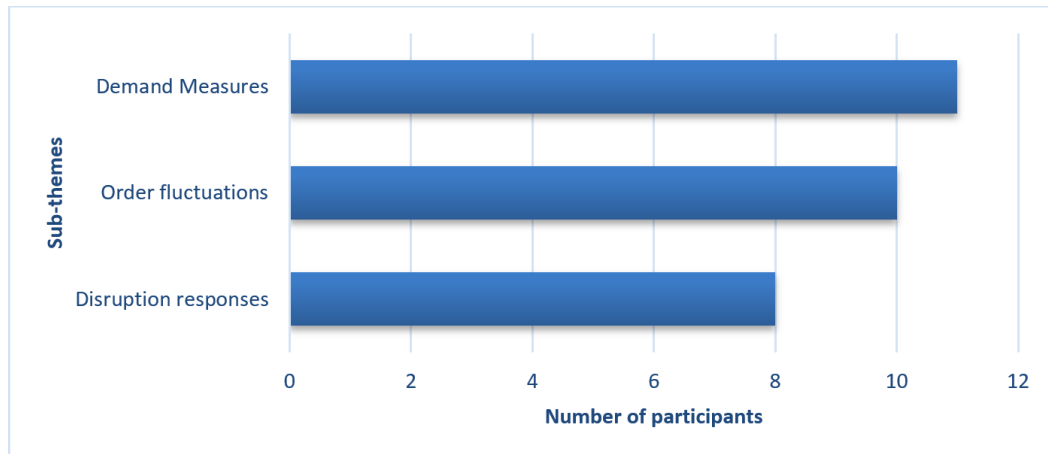
“...we have our fixed monthly work and then peaks, and things come in the form of shutdowns.” (P13, Male, Financial Manager).

“... we then notify our supplier we have had a big upswing in this, we’ve also told them they need to keep a certain amount of stock on the floor for us, in case of these things, so that we can accommodate... we work closely with our suppliers and/or customers, it is not an arms-length relationship, it’s close, because of situations like this.” (P4, Male, DC Manager).

Eight of the 13 participants gave examples of how they responded to disruptions that took place in their firm and illustrated that, in accordance with the literature, operational flexibility such as the ability to modify delivery schedules and operations enabled them to respond to these disruptions effectively (Scholten & Schilder 2015, 472). Three of the 8 participants also said that it was essential to keep their customers and suppliers updated to maintain control of the situation.

“We’re like oh we had load shedding, and they go what’s load shedding and we’re like well, the power goes off for a while. So, we try and explain the situation, but we say to them on a positive note your stuff is being built at night and we are on track... Remember my supplier have to tell me once a week what’s happening, how it’s running, if it’s not running, if it’s standing still... Your supplier, same as me, as I am the supplier of the client, I have to tell my client once a week. So, every Friday, you get a progress report from me.” (P2, Female, Senior Buyer and Office Manager).

**FIGURE 1
THEME 1 FINDINGS**



Visibility

Three factors that indicate visibility in retail firms were identified as quality measures implemented, visibility in suppliers' capabilities and tracking supply chain flows.

Seven of the 13 participants have implemented quality measures in their operations to identify any defects and improve on the existing quality of materials and finished products. This is in line with the literature that indicates that visibility in operations enables the identification of possible interruptions early on before it becomes a significant disruption (Tukamuhabwa et al. 2015, 5605).

“Our boxes were shrinking, and our guys were taping it up before waiting for it to set. You can’t tell that straight away, that will only happen after 3 or 4 days and it will shrink. ... So those are things that you change every day ... we got the technical guys involved with the chemical and we did a few shots and that is how we found out what the problem was. So that is how it was eliminated.” (P8, Female, Director).

Two of the 13 participants indicated that they do not have enough insight into their supplier's abilities and operational performance. Six of the 13 participants indicated that they have visibility in their supplier's capabilities to respond quickly when demand fluctuates, or disruptions occur. This agrees with the literature, which indicates that visibility is created when retail firms share information related to their supply chain partner's strategies, operations and capabilities (Botes et al. 2017, 191).

"We do have visibility from a relationship side, they will tell you what they can do, and they will update you each week as to what they think they can produce." (P6, Male, Procurement Manager).

"We've got regular meetings; check-in meetings, so we know exactly where they stand. So, if they've got issues, I know about the issues and we can plan ahead." (P10, Male, National Operational Manager).

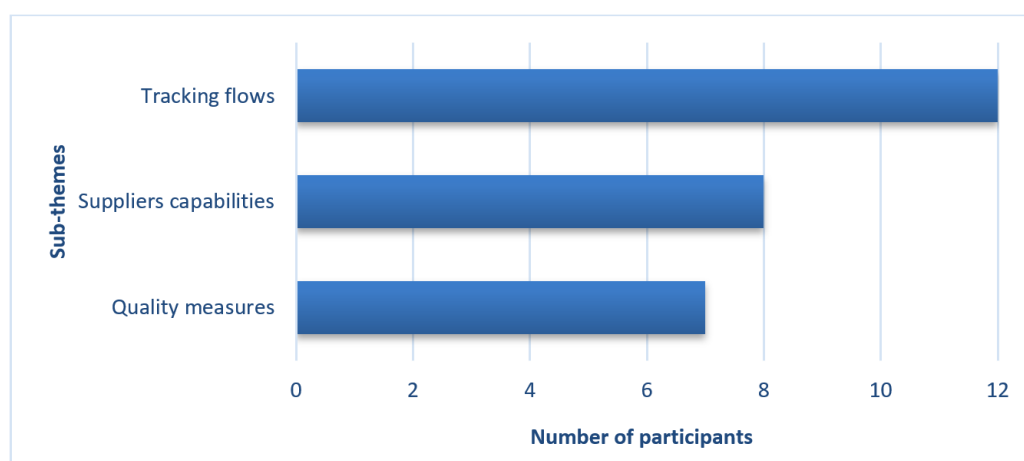
"It's all relevant hey, some better than others. Some customers we've got are absolutely useless, but it's normally the smaller, smaller guys." (P7, Male, Chief Operating Officer).

Two of the 13 participants indicated that they have complete traceability of their raw materials from suppliers to the finished product to their customer. Ten participants indicated that they have efficient tracking systems in place within their retail firms to track their products, but two of these ten retail firms stated that they have no visibility of the products when they leave the warehouse to go to the customers. One participant said that they did not have visibility of the materials when they come from suppliers or when they leave to go to customers due to the lack of traceability systems. Comparing this to the literature, we can see that most of these retail firms do not have complete visibility in their supply chains and this could influence their ability to respond more quickly to disruptions (Botes et al. 2017, 191).

"No, everything by us is traceable, so, I mean from a medicine perspective we do batch traceability; so, you check it from start to finish. And with us working in the pharma industry, I must know what Aspen gave to me; I must know how it goes to the end customer. So, it all has a batch number; it can follow the same chain back again. So, there's a lot of visibility." (P10, Male, National Operational Manager).

"So, we have no tracking of where those products go. We can track it if they give us a batch code, back to the story I gave you just now." (P7, Male, Chief Operating Officer).

FIGURE 2
THEME 2 FINDINGS



Velocity

The degree of the velocity of the participating retail firms was measured through their average customer response times and the recovery time from the worst disruptions that they had experienced.

Two of the 13 participants indicated that their response times could improve, especially in fresh produce. Two of the 13 participants were not sure whether they have good response times compared to their competitors or not,

indicating that they do not monitor their competitor's response times. Eight of the 13 participants stated that their average customer response times was good compared to others in the industry, on average 24 hours to a week, but it also depends on the size of their orders and where their customers and suppliers are located. According to the literature, velocity is indicated by shorter response times and is an asset as inventory is turned into capital sooner, and it reduces product obsolescence (Handfield & Linton 2017, 81).

"I think we can improve. I do believe that one of the biggest challenges at the moment is how do we get our systems to assist us with making processes quicker; how we then try and shave off time from that." (P5, Male, Logistics Executive).

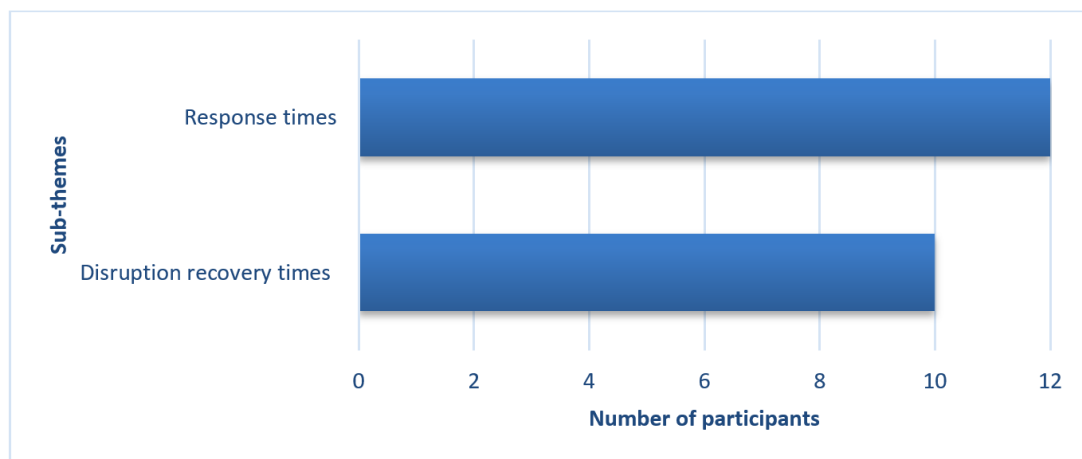
"...and I find that in the market our response times are good, our service is good, and that is the only way that we can keep our doors open for 25 years." (P1, Male, Human Resource and Sales Director).

Five of the 13 participants indicated that they recovered relatively quickly from major supply chain disruptions that occurred in their businesses. The retail firms had different responses to such disruptions. Two retailers switched to alternative suppliers, whereas another supplier decided to remain loyal to their existing supplier, given the good relationship they had spent years building with them. Three of the 13 participants said that it took them a long time to recover from the disruptions; while two of the 13 participants indicated that they are still busy recovering, especially in terms of rebuilding trust and cash flow. We can thus say that, as per the literature, many retail firms (especially suppliers) do not have a high degree of velocity in terms of recovering from the negative effects that disruptions have on their business (Scholten & Schilder 2015, 472).

"Security is a big problem; crime is a big problem in South Africa..." (P11, Female, Managing Director).

"... there's a level of trust that's been broken down between the various parties that must be rebuilt." (P5, Male, Logistics Executive).

**FIGURE 3
THEME 3 FINDINGS**



Efficiency

The financial impact of responding to disruptions and safety stock was observed as indicators of the participating retail firms' level of efficiency.

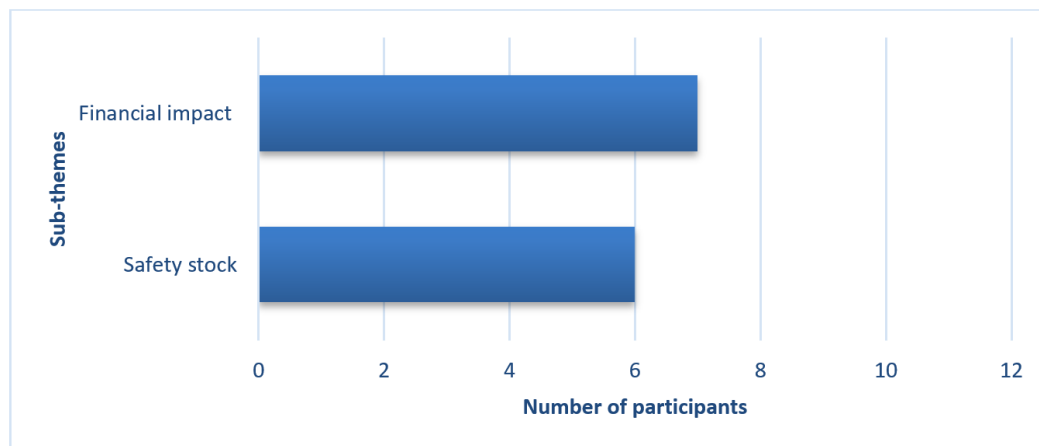
Four of the 13 participants indicated that the disruptions they had to respond to resulted in big financial losses. Three of the 13 participants did not incur major costs when responding to the disruptions. This is in line with the literature and is an indicator of efficiency since agile supply chains can respond to supply chain disruptions cost-efficiently (Gligor et al. 2015, 73).

"...we minimise the disruption at retail. So, we hire extra people; we brought in people from admin into the logistics, the picking, the consolidation of orders and we then do everything we can to minimise the disruption, for example, the situation like a strike." (P5, Male, Logistics Executive).

Six of the 13 participants keep safety stock as a backup in case of disruptions. This is an indicator of efficiency and correlates with the literature in which inventory has to be balanced strategically to ensure the right amount of safety stock is available to act as a buffer when supply chain disruptions occur (Scholten et al., 2014, 214).

“Also, we keep quite a bit of stock...safety stock...yeah we had time to fill up as we depleted our own stock.” (P1, Male, Human Resource and Sales Director).

FIGURE 4
THEME 4 FINDINGS



CONCLUSION

SUMMARY OF FINDINGS

The purpose of this study was to determine how information sharing influences SCRES and more specifically, the pillars of SCRES, namely: flexibility, visibility, velocity and efficiency. The first research question aimed to determine how IS increases the flexibility of SCRES. The findings show that retail firms do have measures in place to obtain customer information to stay up to date with customer requirements. They have processes in place to manage fluctuations by keeping safety stock and working closely with suppliers so they can accommodate them when they suddenly require more stock. The participants also indicated that it is vital to update and communicate with customers and suppliers regularly to maintain control during disruptions. This is in line with the extant literature, which states that flexibility enables the supply partners to coordinate their processes and provide support to one another during disruptions, thereby increasing SCRES.

The second research question aimed to determine how IS increases the visibility of SCRES. The findings show that most retail firms share information regarding their capabilities and shortcomings with their supply chain partners. However, most retail firms do not have complete traceability of their materials from the raw supplier to the end-user. Their visibility is limited to the materials within the control of their firm. Some of the retail firms measure the quality of their products and materials to identify problems early on and reduce operational disruptions. This correlates with the literature in which IS among supply chain partners facilitates visibility and improves cooperation in building a resilient supply chain, thereby effectively increasing resilience.

The third research question aimed to establish how IS increases the velocity of SCRES. In the findings, most of the retail firms have good relationships with their customers and suppliers. These retail firms also have sufficient average response times to customer orders, and more than half of the participants could recover quickly from the major disruptions that took place in their supply chain. This indicates that, because of the IS between their supply chain partners, they respond better to disruptions. This is in line with the literature in which information that is made available between supply chain partners allows retail firms to adapt to real-time events quickly leading to a resilient and sustainable supply chain.

The fourth and final research question aimed to determine how IS increases the efficiency of SCRES. Some of the participants incurred significant financial losses during disruptions, but almost half of the participants indicated that

they had safety stock to act as a buffer during their respective disruptions. They were able to maintain their inventory levels, even when their suppliers could not supply the required materials. This correlates with the literature in which IS and collaborative activities between supply partners allow retail firms to be cost-efficient by having just enough safety stock and still respond to disruptions promptly, thereby increasing SCRES.

THEORETICAL IMPLICATIONS

It is evident in the literature that disruptions can affect businesses in several ways and retail firms need to improve their resilience. However, particularly in a South African context, certain disruptive events tend to occur more often than others. This study emphasises the need for managers to study and evaluate past disruptive occurrences to prepare better for reoccurring events. By sharing information, retail firms can create a more resilient supply chain. This correlates with the literature as SCRES competencies (flexibility, visibility, velocity and efficiency) cannot be developed without the sharing of critical information among supply chain members.

MANAGERIAL RECOMMENDATIONS

Given the high levels of competition, managers in the retail industry should heed special attention to responding to disruptions quickly and effectively. This will enable them to counteract competitors by recovering to the same or better state faster than their competitors can. The impact of COVID-19 should be a severe warning and lesson to managers to augment their SCRES capabilities. Managers should prioritise the understanding and acknowledgement of the value inherited in sharing the right type of information with the right people, in a timely and accurate manner. Managers should spend additional time and resources on strengthening their retail firms SCRES pillars to be able to proactively and efficiently respond to any disruptions.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The researchers conducted this research study in the South African retail industry alone; the findings may, therefore, only apply to this specific industry and regional context. To determine whether the findings of this study can be generalised, future studies could be conducted in other industries within the South African context as well as in other developing countries. The study could also be replicated from a different research methodology such as a quantitative data collection method to include a greater scope of responses, testing the generalisation of the findings over a greater context. This will hold significant value for managers who are interested in knowing the effect of being able to respond effectively to disruptions but, more importantly, how to initiate strategies and action plans from a practical point of view within their retail firms. The researchers also noticed a lack of knowledge of information barriers. Many participants could not identify such barriers within their retail firms. It may be valuable, therefore, if future researchers could design a mechanism or tool to support managers in identifying factors that prevent information exchange.

REFERENCES

- Akkermans, H. & Wassenhove, L.N.V. 2018. 'Supply chain tsunamis: research on low-probability, high-impact disruptions', *Journal of Supply Chain Management*, 54(1): 64-76.
- Alshenqeeti, H. 2014. 'Interviewing as a data collection method: A critical review', *English Linguistics Research*, 3(1): 39-45.
- Ambulkar, S., Blackhurst, J. & Grawe, S. 2015. 'Firm's resilience to supply chain disruptions: Scale development and empirical examination', *Journal of Operations Management*, 33: 111-122.
- Aye, G.C., Balcilar, M., Gupta, R. & Majumdar, A. 2015. 'Forecasting aggregate retail sales: The case of South Africa', *International Journal of Production Economics*, 160: 66-79.
- Bloomberg, L.D. & Volpe, M. 2018. *Completing your qualitative dissertation: A road map from beginning to end*. Sage Publications.

- Bode, C. 2015. 'Structural drivers of upstream supply chain complexity and the frequency of supply chain disruptions', *Journal of Operations Management*, 36: 215-228.
- Botes, A., Niemann, W. & Kotzé, T. 2017. 'Buyer-supplier collaboration and supply chain resilience: a case study in the petrochemical industry', *South African Journal of Industrial Engineering*, 28(4): 183-199.
- Caridi, M., Moretto, A., Perego, A. & Tumino, A. 2014. 'The benefits of supply chain visibility: a value assessment model', *International Journal of Production Economics*, 151(1): 1-19.
- Castleberry, A. & Nolen, A. 2018. 'Thematic analysis of qualitative research data: Is it as easy as it sounds?', *Currents in Pharmacy Teaching and Learning*, 10(6): 807-815.
- Colicchia, C., Creazza, A., Noè, C., & Strozzi, F. 2019. 'Information sharing in supply chains: a review of risks and opportunities using the systematic literature network analysis (SLNA)', *Supply Chain Management: An International Journal*, 24(1): 5-21.
- Connelly, L.M. 2016. 'Trustworthiness in qualitative research', *Medsurg Nursing*, 25(6): 435-437.
- Curtin, M. & Fossey, E. 2007. 'Appraising the trustworthiness of qualitative studies: Guidelines for occupational therapists', *Australian Occupational Therapy Journal*, 54(2): 88-94.
- das Nair, R. 2018. 'The internationalisation of supermarkets and the nature of competitive rivalry in retailing in southern Africa', *Development Southern Africa*, 35(3): 315-333.
- Dos Santos, M.A., Svensson, G. & Padin, C. 2013. 'Indicators of sustainable business practices: Woolworths in South Africa', *Supply Chain Management: An International Journal*, 18(1): 104-108.
- Dubey, R., Gunasekaran, A., Childe, S. J., Fosso Wamba, S., Roubaud, D., & Foropon, C. 2019. 'Empirical investigation of data analytics capability and organisational flexibility as complements to supply chain resilience', *International Journal of Production Research*, 1-19.
- Ekanayake, E. M. A. C., Shen, G. Q., Kumaraswamy, M. M., & Owusu, E. K. 2020. 'Identifying supply chain vulnerabilities in industrialised construction: An overview', *International Journal of Construction Management*, 1-14.
- Fiksel, J., Polyviou, M., Croxton, K.L. & Pettit, T.J. 2015. 'From risk to resilience: learning to deal with disruption', *Risk Management*, 56(2): 78-86.
- Gligor, D.M., Esmark, C.L. & Holcomb, M.C. 2015. 'Performance outcomes of supply chain agility: When should you be agile?', *Journal of Operations Management*, 33(1): 71-82.
- Gölgeci, I., & Kuivalainen, O. 2020. 'Does social capital matter for supply chain resilience? The role of absorptive capacity and marketing-supply chain management alignment', *Industrial Marketing Management*, 84: 63-74.
- Handfield, R. & Linton, T. 2017. 'Velocity! Working capital: The overlooked asset. The Living Supply Chain', 1(4): 81-110.
- Hofmann, E. 2017. 'Big data and supply chain decisions: the impact of volume, variety and velocity properties on the bullwhip effect', *International Journal of Production Research*, 55(17): 5108-5126.
- Ivanov, D., Sokolov, B. & Dolgui, A. 2014. 'The ripple effect in supply chains: trade-off 'efficiency-flexibility-resilience' in disruption management', *International Journal of Production Research*, 52(7): 2154-2172.
- Ivanov, D., & Dolgui, A. 2020. 'Viability of intertwined supply networks: extending the supply chain resilience angles towards survivability. A position paper motivated by COVID-19 outbreak', *International Journal of Production Research*, 1-12.
- Jacobs, B. M. 2018. Skills and knowledge required for merchandising professionals in the South African apparel retail industry. Doctor of Philosophy, Iowa State University.
- Kahlke, R.M. 2014. 'Generic Qualitative Approaches: Pitfalls and Benefits of Methodological Mixology', *International Journal of Qualitative Methods*, 13(1): 37-52.
- Kaur, H. & Singh, S.P. 2018. 'Heuristic modeling for sustainable procurement and logistics in a supply chain using big data', *Computers & Operations Research*, 98: 301-321.
- Kembro, J. & Selviaridis, K. 2015. 'Exploring information sharing in the extended supply chain: an interdependence perspective',

- Supply Chain Management: An International Journal, 20(4): 455-470.
- Lietz, C.A. & Zayas, L.E. 2010. 'Evaluating qualitative research for social work practitioners', *Advances in Social Work*, 11(2): 188-202.
- Mandal, S., Sarathy, R., Korasiga, V.R., Bhattacharya, S. & Dastidar, S.G. 2016. 'Achieving supply chain resilience: the contribution of logistics and supply chain capabilities', *International Journal of Disaster Resilience in the Built Environment*, 7(5): 544-562.
- Melnyk, S.A., Closs, D.J., Griffis, S.E., Zobel, C. & Macdonald, J.R. 2014. 'Understanding supply chain resilience', *Supply Chain Management Review*, 18(1): 34-41.
- Meyer, A., Niemann, W., Uys, G. & Beetge, D. 2019. 'An exploration of supply chain risk management in the South African third-party logistics industry', *Acta Commercii*, 19(1): 1-13.
- Nooraie, S.V. & Parast, M.M. 2015. 'A multi-objective approach to supply chain risk management: integrating visibility with supply and demand risk', *International Journal of Production Economics*, 161: 192-200.
- Nowell, L.S., Norris, J.M., White, D.E. & Moules, N.J. 2017. 'Thematic analysis: Striving to meet the trustworthiness criteria', *International Journal of Qualitative Methods*, 16(1): 1-13.
- Panahifar, F., Byrne, P.J., Salam, M.A. & Heavey, C. 2018. 'Supply chain collaboration and firm's performance: the critical role of information sharing and trust', *Journal of Enterprise Information Management*, 31(3), 358-379.
- Polit, D. & Beck, C. 2012. Specific types of quantitative research. *Nursing Research: Generating and Assessing Evidence for Nursing Practice*. Ninth Edition. Philadelphia, PA: Wolters Kluwer Health, Lippincott Williams & Wilkins.
- Rajesh, R. 2016. 'Forecasting supply chain resilience performance using grey prediction', *Electronic Commerce Research and Applications*, 20(1): 42-58.
- Roy, K. 2015. 'Sampling richness and qualitative integrity: Challenges for research with families', *Journal of Marriage and Family*, 77(1): 243.
- Sabahi, S., & Parast, M. M. 2019. 'Firm innovation and supply chain resilience: a dynamic capability perspective', *International Journal of Logistics Research and Applications*, 1-16.
- Scholten, K. & Schilder, S. 2015. 'The role of collaboration in supply chain resilience', *Supply Chain Management: An International Journal*, 20(4): 471-484.
- Scholten, K., Sharkey Scott, P. & Fynes, B. 2014. 'Mitigation processes—antecedents for building supply chain resilience', *Supply Chain Management: An International Journal*, 19(2): 211-228.
- Shenton, A.K. 2004. 'Strategies for ensuring trustworthiness in qualitative research projects', *Education for information*, 22(2): 63-75.
- Soosay, C.A. & Hyland, P. 2015. 'A decade of supply chain collaboration and directions for future research', *Supply Chain Management: An International Journal*, 20(6): 613-630.
- Taylor, S.J., Bogdan, R. and DeVault, M., 2015. *Introduction to qualitative research methods: A guidebook and resource*. John Wiley & Sons.
- Tiwari, A.K., Tiwari, A. & Samuel, C. 2015. 'Supply chain flexibility: A comprehensive review', *Management Research Review*, 38(7): 767-792.
- Tukamuhabwa, B.R., Stevenson, M., Busby, J. & Zorzini, M. 2015. 'Supply chain resilience: Definition, review and theoretical foundations for further study', *International Journal of Production Research*, 53(18): 5592-5623.
- Véronneau, S. & Roy, J. 2014. 'Security at the source: securing today's critical supply chain networks', *Journal of Transportation Security*, 7(4): 359-371.
- Wieland, A. & Wallenburg, C.M. 2013. 'The influence of relational competencies on supply chain resilience: a relational view', *International Journal of Physical Distribution and Logistics Management*, 43(4): 300-320.

- Wong, C. W., Lirn, T. C., Yang, C. C., & Shang, K. C. 2019. 'Supply chain and external conditions under which supply chain resilience pays: An organisational information processing theorisation', *International Journal of Production Economics*, 1-11.
- Wu, L., Chuang, C.-H. & Hsu, C.-H. 2014. 'Information sharing and collaborative behaviors in enabling supply chain performance: A social exchange perspective', *International Journal of Production Economics*, 148(1): 122-132.
- Xu, S., Zhang, X., Feng, L., & Yang, W. 2020. 'Disruption risks in supply chain management: A literature review based on bibliometric analysis', *International Journal of Production Research*, 1-19.

Online shopping experiences: A quantitative investigation into hedonic value, trust, and risk in the South African retail industry

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ABSTRACT

The purpose of this quantitative study is to investigate the experiences of online shoppers as regards hedonic value, trust, and risk associated with their online shopping. Furthermore, the study sought to investigate whether the respondents of different gender, age, education, and income have different online shopping experience (hedonic value, trust, and risk). Data was collected through an online survey in South Africa of consumers who has shopped online from 2019 to 2020. A total of 164 usable questionnaires were included in the final quantitative data analysis. The results of the study show that online shopping provides a promising avenue for consumers to find the latest products and services. However, the overall hedonic experience was inadequate in providing dimensions such as escape, learning experience, adventure-seeking, and fun activities. Considerable effort is essential to win the trust of online shoppers in South Africa. The ability to judge product quality and compare its quality emerged as a concerning risk factor to customers. The experience of hedonic value for male online shoppers was slightly lower than for females. Significant differences were found between the income and hedonic value of online shoppers. Based on these findings, recommendations were offered that will hopefully enhance online shopping.

Keywords: Online shopping, Experience, Hedonic value, Trust, Risk, Quantitative research, South Africa

INTRODUCTION

Electronic commercial (e-commerce) transactions involve transferring money and buying and selling goods or services using the Internet (Branchi 2020). Globally, business-to-consumer e-commerce sales have grown from €1.96 billion to €14.2 trillion since its inception in 1995 (Laudon & Traver 2016). E-commerce has created many advantages for consumers and businesses, including “reduced costs, increased productivity, reduced processing time, extended market reach, and increased customer loyalty” (Rahayu & Day 2016). Due to these benefits, various industries have changed the way they sell products and services to maximise the effectiveness of business operations (Rahayu & Day 2016).

Internet and mobile technology have never been more advanced and readily available as it is currently (Smith 2018). About 2 billion desktop computers and laptops globally have an Internet connection, and over \$300 million worth of smartphone devices were sold in 2010 compared to \$1.5 billion in 2020 (Loisy 2020; O’Dea 2020). There is a continuous expansion of the Internet’s geographical footprint globally and in January 2020, 57% of the world had access to the Internet, which accounts for 4.5 billion people (Roser, Ritchie & Ortiz-Ospina 2020). There are more than 400 million Internet users in Africa. However, many find it difficult to shop online due to challenges in the local

distribution of goods and services (Desvaux 2020). The telecommunications sector in South Africa, combined with transport and storage, contributes substantially (R231.9 billion in 2020) to South Africa's gross domestic product (Kamer 2021).

Consumers in South Africa are changing their shopping habits and increasingly leaning towards faster and more convenient online shopping (Rawlins 2020). The South African e-commerce market recorded revenue of \$4 062 million in 2020 and is expected to grow by 10% annually from 2020-2024 (ecommerceDB 2021).

PROBLEM STATEMENT AND PRIMARY OBJECTIVE

Despite the impressive revenue and projected growth rates of online shopping in South Africa, the sector still faces several challenges. These challenges include, among others, an upsurge in online scams, perceived risks (financial, product/service, or privacy risk), and website trust associated with online shopping sites (Kühn & Petzer 2018; Malapane 2019). These challenges hold several implications for firms trading online and contribute to low conversion rates in online shopping (Malapane 2019; Clement 2020). Existing research has examined the important role of trust and perceived use, as well as the risk associated with e-commerce (Joubert & van Belle 2013; Pentz, du Preez & Swiegers 2020). However, contextual representation of online shopping experience incorporating hedonic value, trust, and risk appears scant in studies focusing on online shopping in South Africa. Many researchers identify customer experience as an essential dimension (Albayrak, Karasakal, Kocabulut & Dursun 2020; Izogo & Jayawardhena 2018; Widagdo & Roz 2021). Furthermore, few empirical studies exist on whether online shoppers of different demographics (gender, age, education, income) have different experience of hedonic value, trust, and risk in the online shopping experience in South Africa. Consumer demographics related to online shopping experiences assist in understanding the behaviour of online shoppers. This neglect presents research opportunities for examining the online shopping experience in a single study. Thus, two primary objectives motivated this study. The first objective was to investigate online shoppers' experiences based on the hedonic value, trust, and risk associated with their online shopping. Secondly, the study sought to investigate whether the respondents of different gender, age, education, and income have different online shopping experience (hedonic value, trust, and risk). It is anticipated that the findings and recommendations will contribute to the growth of the online industry by providing valuable information to businesses trading online and customers' experience with online shopping, specifically as regards hedonic value, trust, and risk. This information will assist online retailers with their strategic decision-making and enhance their online shoppers' experience while remaining competitive.

LITERATURE REVIEW

The retail industry is an important pillar of the South African economy. In 2017, the industry generated R1 trillion in sales, suggesting that "approximately R31 900 was spent per second by consumers across the industry during 2017" (Statistics South Africa 2018). Compared to other years, retail spending increased by 2.9% in 2017 compared to 2016. This is higher than the 1.7% annual growth increase in 2016 but lower than the 3.3% in 2015 (Statistics South Africa 2018). Farfan (2019) indicates that retail groceries and supermarkets are the sectors with the highest growth potential. Contemporary shopping experience within the retail industry takes place either in brick-and-mortar stores or online (Kushwah & Sing 2019:2). In brick-and-mortar stores, for example, the physical presence of products and sales assistants, and other customers are important for assisting customers in inspecting products and their quality, as well as to check availability and develop personal relationships with salespeople (Schramm-Klein, Swoboda & Morschett 2007:22). Online shopping offers customers an opportunity to buy products or services on the Internet. The benefits of online shopping include convenience, accessibility, and distribution function (Kushwah & Sing 2019:2). This study focuses on online shopping experience.

There is a growing acknowledgement that customer experience is a key driver of satisfaction, loyalty, word of mouth, and competitive advantage (Pei, Guo, Wu, Zhou & Yeh 2020; Roozen & Katidis 2019). A customer's experience is an outcome of a process where they either participate in, or are involved in, a company's delivery of goods or services (Hu & Jasper 2018:153). Shopping experience involves a customer's psychological state, including cognitive and affective experiential components (Singh 2019:4). Thus, online shopping experience covers the mental

and subjective perceptions of interaction with a company's value proposition online (Klaus 2013; Rose, Hair & Clark 2011). Among others, the current study analyses hedonic value (Albayrak, et al. 2020; Hirschman & Holbrook 1982), trust (Hajiha, Shahriari & Vakilian 2014; Nagy & Hajdú 2021) and risk (Bashir, Khwaja, Mahmood, Turi & Latif 2021) as variables that can influence the online shopping experience. Therefore, online shopping experience is a secondary dependent factor measured by three independent factors (hedonic value, trust, and risks). A discussion of these factors is provided below.

Hedonic shopping experience

Hedonic experience is associated with multisensory, fantasy, escape, pleasure, enjoyment, emotive, and entertaining aspects of a shopping experience with a product or service (Albayrak, et al. 2020; Hirschman & Holbrook 1982:92; Picot-Coupey, Krey, Huré, & Ackermann, 2021). A person's hedonic experience is also driven by psychological needs such as emotion, satisfaction, prestige, and other subjective feelings (Widagdo & Roz 2021). Aesthetics and perceived enjoyment facilitate hedonic value (Akel & Armağan 2021). Online shopping aesthetics include shapes, colours, fonts, animation, movements of products and services, while perceived enjoyment results from any gratifying performance, which includes fun or how enjoyable it is to use the technology (Akel & Armağan 2021:7108). Arousal, telepresence, time distortion, and website quality have also been identified as factors influencing hedonic shopping experience (Albayrak, et al. 2020; Lim 2014; Widagdo & Roz 2021). Ali, Li, Hussain and Bakhtawar (2020) also concluded that adventure-seeking, and idea shopping satisfy hedonic value desires and positively affect 'obsessive-compulsive' buying on the Internet. Hedonic value is key to shopping experience as it facilitates customer loyalty (Albayrak, et al. 2020; Picot-Coupey, et al. 2021).

Trust in online shopping

Trust is of vital importance in the online shopping context as it helps to minimise risk and increase customer loyalty (Bagla & Sancheti 2018; Nagy & Hajdú 2021). Trust influences online shopping attitude and intentions (Alharthey 2020). Trust refers to the customer's self-assurance in online shopping, the expectations regarding the ability of the user to use the store, and the benevolence and integrity of the online store/retailer towards the customer (Yu, Balaji & Khong 2015). Website reputation, website quality, and E-word-of mouth communications are crucial elements of trust in online shopping (Alharthey 2020). The ability or competence of the service provider in providing reliable and desirable performance will enhance trust in online shopping (Zhao, Koenig-Lewis, Hanmer-Lloyd & Ward 2010). In the online shopping context, integrity has to do with the online retailer's ability to provide timely and accurate information, maintain commitment, act ethically and create an environment that facilitates confidentiality (Yu, Balaji & Khong 2015). The higher the consumer's trust in the online shop, the higher the probability that a purchase will be made (Nagy & Hajdú 2021).

Risk associated with online shopping

Perceived risk refers to consumers' anxieties in relation to making a purchase (Bashir, et al. 2021). These anxieties are high, especially when purchasing online (Bashir et al. 2021). Managing perceived risks in online shopping improves consumer purchases and minimise anxieties (Tham, Dastane, Johari & Ismail 2019). Product risk, convenience, and return policy have an impact on online shopping behaviour (Tham et al. 2019). Financial risk, performance risk, and psychological risk are also antecedents of perceived risk (Cha & You 2018). Financial risk can be defined as a risk that consumers perceive because of the possibility of higher monetary expenditure or loss of money because of fear that the product may not be delivered (Cha & You 2018). The performance risk is the possibility of failure to deliver or the ordered product failing to perform to the consumer's expectations (Cha & You 2018; Hong 2015). When a consumer uses online shopping, the capability to examine product quality may be limited. The inability to touch and try the product generally results in increased performance risk (Cha et al 2018). Psychological risk is the frustration or mental anxiety caused by the apprehension that the use or possession of a product will not match the shoppers' personality or style (Fang, Wen, George & Prybutok 2016; Cha et al 2018).

Demographic profile of respondents

Knowledge of consumer demographic profiles assists with market segmentation and allocating resources to the target market's specific needs (Lin, Featherman, Brooks & Hajli 2019; Kim, Galliers, Shin, Ryoo & Kim 2012). Online shopping experience is typically influenced by gender, age, education, and income of consumers (Hou 2020; Kim et al. 2012). The effect of hedonic value has been found to be stronger in female consumers than in male consumers (Yang & Lee 2010). Lin, et al. (2019) concludes that gender moderates the influence of perceived risk on attitude towards online products and consumer purchase decision. Statistically significant differences have also been established between hedonic value and the income of online consumers (Kim, et al. 2012). Previous research indicates that age of consumers significantly affects online shopping while gender, income and education have no significant influence on consumer behaviour towards online shopping (Makhitha, van Scheers & Mogashoa 2019). This study also explains whether respondents of different gender, age, education, and income have different experiences of hedonic value, trust, and risk in online shopping. These findings assist in understanding the behaviour of online shoppers and contribute to the literature on online shopping experiences.

RESEARCH METHODOLOGY

This study adopted a quantitative methodology. This allowed the researchers to collect numerical data and use statistical techniques for data analysis (Dudovskiy 2019). The target population included South African consumers who have shopped online over the last 24 months and who are over the age of 19 years. Consumers from this age had the highest online purchasing penetration in 2020 (Coppola 2020). A structured questionnaire was used to gather the necessary information for the study. The questionnaire had three sections. The first section contained the cover letter highlighting the purpose of the study and sought consent from the respondents to participate in the study. The covering letter of the questionnaire further encouraged potential respondents to share the survey link with other potential respondents (Etikan 2016). The second section contained the screening questions to ensure that only qualifying respondents participate in the study. The second section of the questionnaire also determined the profile of the respondents. The third section of the questionnaire contained the statements measuring the constructs in the study. All the statements measuring the hedonic value, trust and risk were adapted from previous studies (Alba & Williams 2013; Herabadi, Verplanken & van Knippenberg 2009; Hirschman & Holbrook 1982; Dai, Forsythe & Kwon 2014; Yu, Balaji & Khong 2015; Suh & Han 2003; Cha & You 2018). A 5-point Likert scale ranging from strongly agree (5) to strongly disagree (1) was used to measure the constructs in the study. To ensure face and content validity, two subject experts in the field of marketing management at a public university were approached to scrutinise the measuring items. Their input helped to restructure three items relating to the hedonic value. Two items related to trust, and three items to risk. Thereafter, the questionnaire was pilot tested with 20 potential respondents who have shopped online within the past 24 months. The pilot study resulted in refining two items relating to trust and eliminating one item relating to risk. The data collection process took place on QuestionPro - a web-based survey platform between August and October 2020 after ethical clearance was granted. The link to the online survey was shared through the researchers' mail list and relied on respondents who were available and willing to participate in the study (Wiid & Diggins 2013).

This study followed the sampling technique by Comrey and Lee (2013) which recommended that a sample size of 300 would be adequate and good for statistical analysis. However, a total of 164 usable questionnaires were received for the data analysis. This represents a response rate of 54.7%. The Statistica computer software version 13.5 was used for the data analysis. The analysis included the profile of the respondents, descriptive statistics and reliability of measuring items (means score, standard deviation, Cronbach's alpha), correlation analysis, independent t-test, and ANOVA.

RESULTS AND FINDINGS

It emerged from Table 1 that more females (53.7%) participated in the study compared to males (45.7%). A large proportion of the respondents were between 30-39 years (48.2%). More than two-thirds of the respondents have a degree or postgraduate qualification, and over 50% of the respondents earn more than R 19 999 per month.

TABLE 1
PROFILE OF RESPONDENTS

		Frequency	Percentage
Gender	Male	75	45.7
	Female	88	53.7
	Total	163	99.4
	Missing System	1	0.6
Age	20-29 years	30	18.3
	30-39 years	79	48.2
	40-49 years	33	20.1
	50-59 years	18	11
	60+ years	4	2.4
Education	Grade 12 or below	28	17.1
	College certificate	24	14.6
	University diploma or degree	56	34.1
	Postgraduate qualification	56	34.1
Monthly income	Below R5 000	10	6.1
	R5 000 - R9 999	17	10.4
	R10 000 - R19 999	51	31.1
	Above R19 999	86	52.4

The mean scores, standard deviation, and Cronbach's alphas of the items on the 5-point Likert scale are displayed in Table 2. In terms of the hedonic value, the lowest mean score (M=2.63) was found for the statement that "shopping online provided me with an escape from things that I need to do". The statement that "online shopping platforms provide a good place to find the latest products and services" attracted the highest mean score (M=4.17) for hedonic value. Regarding trust, the highest mean score (M=4.06) was found for the item stating that "When I trust the online store, it affects my intention to shop". Two statements namely: "I find it risky to shop online in South Africa" (M=2.82) and "I am concerned that I may not receive the item purchased" (M=2.98) attracted the lowest mean scores for the risk factor. The standard deviation values were below 2.0, suggesting that there are no issues of outliers (Yang, Rahardja & Fränti 2019:2). The Cronbach's alpha (CA) values are acceptable for all three factors. The CA values ranged from 0.696 to 0.747, indicating adequate reliability (Ursachi, Horodnic & Zait 2015).

The validity of the data was established by assessing the correlation coefficients between the variables (Hair, Wolfinbarger, Ortinau & Bush 2010). Pearson Product Moment of correlation analysis was conducted

TABLE 2
DESCRIPTIVE STATISTICS AND RELIABILITY OF MEASURING ITEMS

		Mean	Std. Dev.	Cronbach's Alpha
HEDONIC VALUE				0.706
HV1	I experience a sense of adventure when shopping for products using an online website	3.62	0.853	
HV2	Online shopping platforms provide a good place to find the latest products and services	4.17	0.697	
HV3	I get so absorbed in online shopping that I lose track of time	3.05	1.118	
HV4	Online shopping provides a learning experience about a brand, product, or services	3.76	0.798	
HV5	I visit online shopping websites just for the fun of it not actually to purchase any products	3.19	1.1	
HV6	I shop online because I want to and not because I have to	3.95	0.912	
HV7	Shopping online provides me with an escape from things that I need to do	2.63	1.178	
HV8	When I am bored I browse online shopping websites	3.07	1.231	
HV9	I usually find what I need using online stores	3.76	0.798	
TRUST				0.747
T1	When I trust the online store, it affects my intention to shop	4.06	0.827	
T2	I trust e-commerce websites in South Africa	3.37	0.753	
T3	The web retailer is one that keeps promises and shows commitment	3.59	0.708	
T4	I trust this online retailer because it keeps my best interest in mind	3.43	0.718	
T5	The online retailer is trustworthy	3.49	0.66	
T6	The online retailer acts ethically and creates an environment for maintaining confidentiality	3.56	0.728	
T7	The online retailer provides timely and accurate information about products and services	3.73	0.721	
RISK				0.696
R1	I find it risky to shop online in South Africa	2.82	0.967	
R2	I am concerned that I may not receive the item purchased	2.98	1.003	
R3	It is difficult for me to judge products' quality adequately (e.g. colour, fabric texture, fit, etc.)	3.78	0.914	
R4	It is difficult for me to compare the quality of similar products online	3.57	1.063	

to determine the relationships among the variables. Correlation is significant at the 0.01 level (2-tailed) and the strength of correlation was interpreted as: $|r| < 0.3$ = Small relationship; $0.3 < |r| < 0.5$ = Medium relationship and $|r| > 0.5$ = Large relationship (Soderstrom 2008). The results indicate a moderately significant positive relationship between hedonic value and trust ($r=0.391$) and between trust and risk ($r=0.313$). A small correlation was found between hedonic value and risk ($r=0.1$) however, it was statistically insignificant. The results suggest that there is a relationship between the variables identified to measure online shopping experience.

TABLE 3
CORRELATIONS

	HV	Trust	Risk
Hedonic value	1	.391**	0.1
Trust		1	.313**
Risk			1

** Correlation is significant at the 0.01 level (2-tailed).

Independent sample test

An independent sample test was performed to compare the means of two distinct groups to establish whether there is statistical evidence that the associated population means are significantly different (Ross & Willson 2017:9). Levene's test is performed as an assumption test for the independent sample t-test. Therefore in the current study, Levene's test was used for only the gender as it was the only demographic profile with two categories. The remaining demographic profile variables have three or more categories and therefore made use of the ANOVA test which has its assumption tests. As Levene's test for equality of variances (see Table 4) was insignificant ($F = 0.003$, $Sig = 0.959$), the independent sample t-test assumption of equal variances is satisfied. The independent sample t-test was performed to determine whether the mean score differed between male and female respondents. It was determined that there was a statistically significant difference between the mean Hedonic value score according to gender ($t = -2.962$, $df = 161$, $sig = 0.004$).

TABLE 4
GENDER: LEVENE'S TEST FOR EQUALITY OF VARIANCE

		F	Sig.	t	df	Sig. (2-tailed)
Hedonic value	Equal variances assumed	0.003	0.959	-2.962	161	0.004*
	Equal variances not assumed			-2.962	156.9	0.004
Trust	Equal variances assumed	1.534	0.217	-0.62	161	0.536
	Equal variances not assumed			-0.614	148.62	0.54
Risk	Equal variances assumed	1.523	0.219	0.196	161	0.845
	Equal variances not assumed			0.194	147.46	0.847

* $p < 0.05$

Upon review of the group statistics (see Table 5), female respondents scored significantly higher ($M = 3.572$, $SD = 0.51885$) than the male respondents ($M = 3.3304$, $SD = 0.51922$) for Hedonic value. Cohen's d (0.465) between males and females indicates that there is a small practical significance.

TABLE 5
GENDER: GROUP STATISTICS

	Gender	N	Mean	Std. Deviation	Std. Error Mean	Cohen's d
Hedonic value	Male	75	3.3304	0.51922	0.06	
	Female	88	3.572	0.51885	0.0553	0.465636

Analysis of Variance (ANOVA) test

ANOVA was performed to investigate whether there are statistical differences between age, education, and income and the identified factors. No significant differences were found for age and education and the factors in the study (see Table 6A and 6B). The ANOVA test revealed a significant difference between the respondents' hedonic value and income ($F=2.80$, $df=163$, $p=0.042$) (see Table 6C).

**TABLE 6A
ANOVA FOR AGE**

		Sum of Squares	df	Mean Square	F	Sig.
Hedonic value	Between Groups	2.121	4	0.53	1.882	0.116
	Within Groups	44.804	159	0.282		
	Total	46.925	163			
Trust	Between Groups	0.146	4	0.036	0.167	0.955
	Within Groups	34.562	159	0.217		
	Total	34.707	163			
Risk	Between Groups	4.355	4	1.089	2.195	0.072
	Within Groups	78.88	159	0.496		
	Total	83.236	163			

* $p<0.05$

**TABLE 6B
ANOVA FOR EDUCATION**

		Sum of Squares	df	Mean Square	F	Sig.
Hedonic value	Between Groups	0.12	3	0.04	0.137	0.938
	Within Groups	46.805	160	0.293		
	Total	46.925	163			
Trust	Between Groups	0.382	3	0.127	0.594	0.62
	Within Groups	34.325	160	0.215		
	Total	34.707	163			
Risk	Between Groups	2.558	3	0.853	1.691	0.171
	Within Groups	80.677	160	0.504		
	Total	83.236	163			

* $p<0.05$

**TABLE 6C
ANOVA FOR INCOME**

		Sum of Squares	df	Mean Square	F	Sig.
Hedonic value	Between Groups	2.341	3	0.78	2.801	0.042*
	Within Groups	44.584	160	0.279		
	Total	46.925	163			
Trust	Between Groups	0.669	3	0.223	1.049	0.373
	Within Groups	34.038	160	0.213		
	Total	34.707	163			
Risk	Between Groups	1.745	3	0.582	1.142	0.334
	Within Groups	81.491	160	0.509		
	Total	83.236	163			

* $p<0.05$

A multiple comparison using Tukey HSD test was performed based on the ANOVA results for income of the respondents to assess where significant differences occurred. It emerged that there is a significant difference between the mean difference of a paired comparison for respondents whose monthly income is R5000-R9999 and those earning above R19 999 ($p=0.024$) (see Table 7). The mean score for those earning R5000-R9999 ($M=3.79$) was higher than those earning above R19 999 ($M=3.39$) (see Table 8).

TABLE 7
TUKEY HSD TEST FOR INCOME

Dependent variable	(I) Monthly income	(J) Monthly income	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Hedonic value	Below R5000	R5000 - R9 999	-0.26405	0.21037	0.593	-0.8102	0.2821
		R10 000 – R19 999	0.0671	0.18256	0.983	-0.4069	0.5411
		Above R19 999	0.13798	0.17637	0.862	-0.3199	0.5959
	R5 000 - R9 999	Below R5 000	0.26405	0.21037	0.593	-0.2821	0.8102
		R10 000 - R19 999	0.33115	0.14783	0.117	-0.0527	0.715
		Above R19 999	.40204*	0.14011	0.024	0.0383	0.7658
	R10 000 – R19 999	Below R5 000	-0.0671	0.18256	0.983	-0.5411	0.4069
		R5 000 – R9 999	-0.33115	0.14783	0.117	-0.715	0.0527
		Above R19 999	0.07088	0.09329	0.872	-0.1713	0.3131
	Above R19 999	Below R5 000	-0.13798	0.17637	0.862	-0.5959	0.3199
		R5 000 - R9 999	-.40204*	0.14011	0.024	-0.7658	-0.0383
		R10 000 - R19 999	-0.07088	0.09329	0.872	-0.3131	0.1713

* The mean difference is significant at the 0.05 level.

TABLE 8
DESCRIPTIVE FOR INCOME

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			
						Lower Bound	Upper Bound	Mini	Maxi
Hedonic value	Below R5 000	10	3.5333	0.58514	0.18504	3.1148	3.9519	2.89	4.67
	R5 000 - R9 999	17	3.7974	0.56824	0.13782	3.5052	4.0895	3	5
	R10 000 - R19 999	51	3.4662	0.55778	0.07811	3.3094	3.6231	2	4.78
	Above R19 999	86	3.3953	0.49444	0.05332	3.2893	3.5014	2.33	4.67
	Total	164	3.4675	0.53655	0.0419	3.3847	3.5502	2	5

DISCUSSION OF RESULTS

The purpose of this study was to investigate the experiences of online shoppers based on hedonic value, trust, and risk associated with their online shopping. Furthermore, the study sought to investigate whether the respondents of different gender, age, education, and income have different online shopping experience (hedonic value, trust, and risk). The results of this study showed that except for item HV2, the items measuring hedonic value were below the mean score of 4.0. This suggests that respondents seemed not to agree with the statements regarding their experiences of hedonic value in online shopping in general. The lowest mean score ($M=2.63$) was recorded for item HV7, which implies that the online shopping experience offered little value or opportunities for consumers to escape from daily routine activities. Moreover, the results show that female online shoppers have experienced favourable hedonic value ($M=3.57$) than males ($M=3.33$). The findings in this study confirmed the view of Yang and Lee (2010)

that female online consumers have a stronger desire for hedonic value than male consumers. It is important to focus on strategies that will enhance the hedonic value offered specifically to female consumers shopping online. The results of the study also revealed that there is a significant difference between hedonic value and income of online shoppers. The finding is consistent with a previous study by Kim et al. (2012), which suggested a significant difference between hedonic value and income of Internet shoppers. This indicates that income is necessary to shop online. A significant difference was found for customers earning R5000-R9999 and those earning above R19 999 per month. The mean score for those earning R5000-R9999 ($M=3.79$) was higher than those earning above R19 999 ($M=3.39$). Attention and resources should enhance the hedonic value offered to online shoppers earning above R19 999.

Trust in online shopping is still an issue in South Africa. The results relating to trust show that except for item T1 ($M=4.06$), the mean scores for the remaining items measuring trust were below 4.0 but above 3.0. This seems to point to the view that most online shoppers did not agree with the statements relating to trust. They seem to be neutral in their responses. Customers' confidence in the service provider to provide a consistent service, act ethically, and offer desirable performance in fulfilling their needs as intended are generally still concerns that online retailers in South Africa need to overcome. The findings in the current study substantiate previous studies by Yu, et al. (2015) and Zhao, et al. (2010) which indicate that service provider integrity and competence increases trust in online shopping. Literature sources indicate that risk associated with online shopping is still an issue to be addressed by online stores (Bashir et al. 2021; Cha & You 2018; Tham et al. 2019). Contrary to these, this study indicated that South African shoppers do not find it risky to shop online and were not concerned with the delivery of products they have purchased. However, they seem to be apprehensive about their inability to adequately judge and compare product quality (e.g. colour, fabric texture, fit) before purchase. The findings thus link up with the previous study by Cha and You (2018) which found that when consumers are unable to touch and try the online product before making a purchase decision, it results in increased performance risk.

CONCLUSIONS AND RECOMMENDATIONS

Online shopping has grown in many parts of the world. In the contemporary business environment, customers are searching for a pleasurable experience in online shopping. This study has established that online shopping provides a good place for consumers to find the latest products and services. However, the overall hedonic experience such as escape, learning experience, adventure-seeking, and fun activities was very low. Enhanced hedonic experience may increase online shopping in South Africa. Therefore, it is recommended that activities such as learning experience (detailed online information about a brand, product, or services) should be provided to assist customers in making the right purchase decision. The online shopping website should include fun (product contests or pop-up games that will help consumers navigate through several promotional products, for example). This might assist customers to escape from their routine activities. Since the experience of hedonic value for male shoppers was slightly lower than for females, it is recommended that more hedonic value initiatives should target female shoppers. For example, online contests and promotion for females are encouraged. In terms of income, a conscious effort should be made to devote resources towards enhancing the hedonic value for online shoppers who are earning above R19 999.

Trust plays a pivotal role in online shopping. Customers desire that the online retailer fulfil promises efficiently and provide excellent service to ensure maximum return on their investment. Several of the responses relating to trust had a mean score of below 4.0. Therefore, it is concluded that the respondents did not agree with the statements. A lot of effort is required to win the trust of online shoppers in South Africa. The findings can be used as part of the planning and strategy approach for online store design and functionality as well as marketing communications. Therefore, it is recommended that a definite time period be indicated on the website for when purchased goods will be delivered and it should be adhered to. Accurate detailed information should be provided on the website to assist the customer with their purchase choice. Online retailers should prioritise the interest of customers in all business dealings. It is also vital for online retailers to act ethically in an environment that will uphold the respondents' personal information. Regarding risks, the ability to judge product quality and compare the quality of the products emerged as a concern for customers. From a managerial point of view, online retailers are encouraged to consistently offer quality products and services to customers. Online retailers should also offer customers guarantees, no risk, and a no-cost return policy.

This will help build confidence and minimise the risk associated with online shopping. Finally, to be competitive in the online shopping context, online stores should constantly seek feedback from customers, listen to concerns raised, and respond to changes in expectations.

LIMITATIONS AND FUTURE RESEARCH

As in many other studies, this study is not without limitations. Firstly, as explained by the literature, this study focused on only three factors (hedonic value, trust, and risk) to investigate the experience of online shoppers in South Africa. Future research should look beyond these factors to understand the experiences of online shoppers in South Africa. The study can also be repeated in different countries to generalise the findings. The study did not determine the relationship between the independent variables (hedonic value, trust, risk) and the dependent variable (online shopping experience). Future research should strive to establish these relationships. The study has made significant academic and industry contributions, but the small sample size will not permit the findings to be generalised to the entire South African population. Future research should attempt to use a large sample size in an effort to generalise the findings. Finally, this study adopted the quantitative research methodology. Future research should attempt to utilise the qualitative or mixed-method. This would give respondents an opportunity to interact and share their opinions regarding their online shopping experiences.

REFERENCES

- Alba, J. & Williams, E. 2013. Pleasure principles: A review of research on hedonic consumption. *Journal of Consumer Psychology*, 23:2-18.
- Alharthey, B. 2020. The role of online trust in forming online shopping intentions. *International Journal of Online marketing*, 10(1):32-56.
- Albayrak, T., Karasakal, S., Kocabulut, Ö. & Dursun, A. 2020. Customer loyalty towards travel agency websites: The role of trust and hedonic value. *Journal of Quality Assurance in Hospitality and Tourism*, 21:50-77.
- Ali, A., Li, C., Hussain, A. & Bakhtawar. 2020. Hedonic shopping motivations and obsessive-compulsive buying on the Internet. *Global Business Review*, 1-18.
- Akel, G. & Armağan, E. 2021. Hedonic and utilitarian benefits as determinants of the application continuance intention in location-based applications: The mediating role of satisfaction. *Multimedia Tools and Applications*, 80: 7103-7124.
- Bagla, R. K. & Sancheti, V. 2018. Gaps in customer satisfaction with digital wallets: Challenges for sustainability. *Journal of Management Development*, 37(6): 442-451.
- Bashir, S., Khwaja, M. G., Mahmood, A., Turi, J. A. & Latif, K. F. 2021. Refining e-shoppers' perceived risks: Development and validation of new measurement scale. *Journal of Retailing and Consumer Services*, 58, 102285.
- Branchi, V. 2020. Ecommerce Definition - What Is Ecommerce. [Online] Shopify. Available at: <https://www.shopify.com/encyclopedia/what-is-ecommerce> [Accessed 2 June 2020].
- Cha, H. S. & You, S. 2018. The value and risk of curated shopping: Online consumer's choice. *Proceeding of the 51st Hawaii International Conference on System Sciences*, 3578-3587.
- Clement, J. 2020. Global Online Shopping: Device Conversion Rate 2019 | Statista. [online] Statista. Available at: <https://www.statista.com/statistics/918503/worldwide-online-shopper-conversion-rate-by-device/> [Accessed 3 June 2020].
- Comrey, A.L. & Lee, H.B. 2013. *A First Course in Factor Analysis*. 2nd Ed. New Jersey: Psychology Press.
- Coppola, D. 2020. Online purchasing penetration in Great Britain 2012-2020, by age. [Online]. Available at: <https://www.statista.com/statistics/275972/online-purchasing-penetration-in-great-britain-by-age/> (Accessed on 11 April 2021)
- Dai, B., Forsythe, S. & Kwon, W. 2014. The impact of online shopping experience on risk perceptions and online purchase intentions: Does product category matter? *Journal of Electronic Commerce Research*, 15(1):13-24.

- Desvaux, G., 2020. How E-Commerce Supports African Business Growth. [online] Mckinsey and Company. Available at: <https://www.mckinsey.com/featured-insights/middle-east-and-africa/how-ecommerce-supports-african-business-growth#> [Accessed 2 June 2020].
- Dudovskiy, J. 2019. Positivism: research methodology. [Online]. Available at: <https://research-methodology.net/research-philosophy/positivism/> [Accessed 16 April 2019].
- Etikan, I. 2016. Comparison of snowball sampling and sequential sampling technique. *Biometrics & Biostatistics International Journal*, 3(1).
- ecommerceDB. 2021. E-commerce market analysis: The eCommerce market in South Africa. [Online]. Available at: <https://ecommercedb.com/en/markets/za/all> (Accessed on 31 March 2021).
- Farfan, B. 2019. South African retail industry chains with the largest revenue. [Online]. Available at <https://www.thebalancesmb.com/largest-african-retailers-2892272> (Accessed on 8 April 2021).
- Fang, J., Wen, C., George, B. & Prybutok, V. 2016. Consumer heterogeneity, perceived value, and repurchase decision-making in online shopping: The role of gender, age, and shopping motives. *Journal of Electronic Commerce Research*, 17(2):116-130.
- Hair, J.F., Wolfinbarger, M.F., Ortinau, D.J. & Bush, R.P. 2010. *Essentials of marketing research*. 2nd ed. New York: McGraw-Hill.
- Hajiha, A., Shahriari, M. & Vakilian, N. 2014. The role of perceived value on customer-shopping intention using technology acceptance model, in *Proceedings of the IEEE International Conference of Industrial Engineering and Engineering Management*, Bandar Sunway, Malaysia. 1136 - 1140.
- Herabadi, A., Verplanken, B. & van Knippenberg, A. 2009. Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations. *Asian Journal of Social Psychology*, 12(1):20-31.
- Hirschman, E. & Holbrook, M. 1982. Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing*, 46(3):92-101.
- Hou, J. 2020. Online shopping patronage: Do demographics and psychographics really matter? *Journal of Marketing Development and Competitiveness*, 14(5): 9-19.
- Hu, H. & Jasper, C. 2018. Understanding the Shopping Experience and Its Implications for Malls as Marketing Media. *Journal of Advertising Research*, 58(2):151-164.
- Izogo, E. & Jayawardhena, C. 2018. Online shopping experience in an emerging e-retailing market. *Journal of Research in Interactive Marketing*, 12(2):193-214.
- Jobodwana, Z. N. 2009. E-commerce and mobile commerce in South Africa: Regulatory challenges. *Journal of International Commercial Law and Technology*, 4(4):287-298.
- Joubert, J. & van Belle, J-P. 2013. The role of trust and risk in mobile commerce adoption within South Africa. *International Journal of Business, Humanities and Technology*, 3(2), 27-38.
- Kamer, L. 2021. Transport sector's value added to GDP in South Africa 2014-2020. Statista [Online] Available at: <https://www.statista.com/statistics/1121220/transport-sector-value-added-to-gdp-in-south-africa/> (Accessed on 24/3/2021).
- Kim, C. Galliers, R. D., Shin, N., Ryoo, J. H. & Kim, J. 2012. Factors influencing internet shopping value and customer repurchase intention. *Electronic Commerce Research and Applications*, 11:374-387.
- Klaus, P. 2013. The case of Amazon.com: Towards a conceptual framework of online customer service experience (OCSE) using the emerging consensus technique (ECT). *Journal of Services Marketing*, 27(6):443-457.
- Kühn, S. W. & Petzer, D. J. 2018. Fostering purchase intentions toward online retailer websites in an emerging market: An S-O-R perspective. *Journal of Internet Commerce*, 17(3): 255-282.
- Kushwah, S. V. & Sing, A. 2019. From traditional shopping to online shopping: A study of the paradigm shift in consumer behaviour. *Journal of General Management Research*, 6(1):1-13.

- Laudon, K. & Traver, C. 2016. E-Commerce. 12th ed. New York: Pearson.
- Lim, W. 2014. Understanding the influence of online flow elements on hedonic and utilitarian online shopping experiences: A case of online group buying. *Journal of Information Systems*, 28(2):287-306.
- Lin, X., Featherman, M., Brooks, S. L. & Hajli, N. 2019. Exploring gender differences in online consumer purchase decision making: An online product presentation perspective. *Information Systems Frontiers*, 21:1187-1201.
- Loisy, N. 2020. How many computers are there in the world? — SCMO. [Online] SCMO. Available at: <https://www.scmo.net/faq/2019/8/9/how-many-compaters-is-there-in-the-world#:~:text=In%202019%2C%20there%20were%20over,servers%2C%20desktops%2C%20and%20laptops>. [Accessed 2 June 2020].
- Malapane, T. A. 2019. A risk analysis of e-commerce: A case of South African online shopping space. 978-1-7281-0998-5/19 IEEE.
- Makhitha, K. M., van Scheers, L. & Mogashoa, C. 2019. Which consumer attributes influence South African consumers to shop online. *Journal of Business and Retail Management Research*, 13(4): 312-325.
- Nagy, S. & Hajdú, N. 2021. Consumer acceptance of the use of artificial intelligence in online shopping: Evidence from Hungary. *Amfiteatru Economic*, 23(56):155-173.
- O'Dea, S., 2020. Cell phone sales worldwide 2007-2020 | Statista. [Online] Statista. Available at: <https://www.statista.com/statistics/263437/global-smartphone-sales-to-end-users-since-2007/> [Accessed 2 June 2020].
- Pei, X. L., Guo, J. N., Wu, T. J., Zhou, W. X. & Yeh, S. P. 2020. Does the effect of customer experience on customer satisfaction create a sustainable competitive advantage? A comparative study of different shopping solutions. *Sustainability*, 12, 7436.
- Pentz, C. D., du Preeze, R. & Swiegers, L. 2020. To bu(Y) or not to bu(Y): Perceived risk barriers to online shopping among South African generation Y consumers. *Cogent Business & Management*, 7, 1827813.
- Picot-Coupey, K., Krey, N., Huré, E. & Ackermann, C. L. 2021. Still work and/or fun? Corroboration of the hedonic and utilitarian shopping value scale. *Journal of Business Research*, 126, 578-590.
- Rahayu, R. & Day, J. 2016. E-commerce adoption by SMEs in developing countries: evidence from Indonesia. *Eurasian Business Review*, 7(1):25-41.
- Rawlins, L. 2020. Only 4% of South Africans are regular online shoppers. [online] ITWeb. Available at: <https://www.itweb.co.za/content/xnklOqzb2lpq4Ymz> [Accessed 1 March 2020].
- Rose, S., Hair, N. & Clark, M. 2011. Online customer experience: A review of the business-to-consumer online purchase context. *International Journal of Management Reviews*, 13(1):24-39.
- Roser, M., Ritchie, H. & Ortiz-Ospina, E. 2020. World internet users' statistics and 2020 world population stats. [Online] Internetworldstats.com. Available at: <https://www.internetworldstats.com/stats.htm> [Accessed 2 June 2020].
- Ross, A. & Willson, V. L. 2017. Basic and advanced statistical test: Writing results sections and creating tables and figures. Rotterdam: Sense Publishers.
- Roozen, I. & Katidis, P. I. 2019. The importance of the service and shopping customer experience in a retail environment. *Journal of Relationship Marketing*, 18(4), 247-279.
- Schramm-Klein, H., Swoboda, B. & Morschett, D. 2007. Internet vs. brick-and-mortar stores - analysing the influence of shopping motives on retail channel choice among internet users. *Journal of Customer Behaviour*, 6(1):19-36.
- Singh, R. 2019. Why do online grocery shoppers switch or stay? An exploratory analysis of consumers' response to online grocery shopping experience. *International Journal of Retail & Distribution Management*, 47(12): 1300-1317.
- Smith, C. 2018. How ecommerce is exploding in SA [Online]. Available at: <https://www.fin24.com/Economy/how-ecommerce-is-exploding-in-sa-20180316> [Accessed 4 March 2020].
- Soderstrom, I. R. 2008. Introductory criminal justice statistics. Long Grove: Waveland.
- Statistics South Africa. 2018. Five facts about the retail trade industry. [Online]. Available at: <http://www.statssa.gov.za/?p=11101> (Accessed on 8 April 2021).

- Suh, B. & Han, I. 2003. Effect of trust on customer acceptance of Internet banking. *Electronic Commerce Research and Applications*, 1(3-4):247-263.
- Tham, K., Dastane, O., Johari, Z. & Ismail, N., 2019. Perceived Risk Factors Affecting Consumers' Online Shopping Behaviour. *The Journal of Asian Finance, Economics and Business*, 6(4): 249-260.
- Ursachi, G., Horodnic, I. & Zait, A. 2015. How reliable are measuring scales? External factors with indirect influence on reliability estimators. 7th International conference on globalisation and higher education in economics and business administration, GEBA 2013. *Procedia Economics and Finance*, 20:679-686.
- Widagdo, B. & Roz, K. 2021. Hedonic shopping motivations and impulse buying: The effect of website quality on customer satisfaction. *Journal of Asian finance, Economics and Business*, 8: 395-405.
- Wiid, J. & Diggines, C. 2012. *Marketing research*. 2nd ed. Cape Town: Juta.
- Yang, K. & Lee, H. J. 2010. Gender differences in using mobile data services: Utilitarian and hedonic value approaches. *Journal of Research in Interactive Marketing*, 4(2): 142-156.
- Yang, J., Rahardja, S. & Fränti, P. 2019, December. Outlier detection: how to threshold outlier scores? In *Proceedings of the international conference on artificial intelligence, information processing and cloud computing*, 1-6.
- Yu, P., Balaji, M. & Khong, K. 2015. Building trust in internet banking: A trustworthiness perspective. *Industrial Management & Data Systems*, 115(2):235-252.
- Zhao, A., Koenig-Lewis, N., Hanmer-Lloyd, S. & Ward, P. 2010. Adoption of internet banking services in China: Is it all about trust? *International Journal of Bank Marketing*, 28(1):7-26.

Whether to adopt or not? A cross-country comparison of consumer resistance towards the Internet of Things in households

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ABSTRACT

The uptake of IoTs in households worldwide is lower than predicted and comparatively slower in developing countries than in developed countries due to inadequate digital infrastructure. This study aims to understand why the Internet of Things in households (specifically smart household appliances) have been resisted and have not been adopted to predicted levels by comparing Germany as a developed country to South Africa as a developing country. The specific focus was on innovation and consumer characteristics, perceived risk of adoption, and personality considerations, using a smart refrigerator. Through regression analysis of data generated from a quantitative survey of 1665 consumers from Germany and South Africa, it was found that both resistance and adoption are influenced by how intrusive the smart appliance is, how the consumer perceives its usefulness and whether it is considered novel or new. The perceived price of the smart appliance also played a role in adoption. Only South Africans' perception of their capability to use a technologically innovative product influences their resistance to the smart appliance. Adoption is not the inverse of resistance when considering the constructs in their totality. Consumer innovativeness, influenced by uncertainty avoidance, played a significant role among the German and South African participants both resisting and adopting smart products. However, the cultural dimension of uncertainty avoidance also influenced consumer innovativeness. On the other hand, South Africans' spirit of innovation influenced their resistance to and adoption of smart appliances more strongly than their German counterparts.

Keywords: Resistance; adoption; smart products; IoT; consumer characteristics, innovation characteristics, perceived risk, nostalgia, spirit of innovation

INTRODUCTION

The recent emergence of the Internet of Things (IoT), as a pillar of Industry 4.0 (Ancarani, Di Mauro, Legenvre & Cardella 2020), is changing how we live, work and relate to one another (Balaji & Roy 2017). New technologies, such as smart home appliances, as one of the types of IoTs available, have continued to drive change at a personal and organisational level. IoTs are network-connected devices and systems, allowing for the collection and exchange of data (Hsu & Lin 2016; Meola 2016) and are growing into a substantial industry with the opportunity to transform society. Information technology analysts have predicted that by 2020, 50 billion IoT devices would be deployed worldwide. However, only around nine billion are connected to date, including approximately eight billion mobile phones and home devices (Eseye 2020), indicating a slower than expected adoption (Hong, Nam & Kim 2020; Van Hung, Thao, Kieu & Hien 2021).

Various authors have studied the possible reasons why IoTs have been resisted and not adopted to the predicted levels (Balta-Ozkan, Davidson, Bicket & Whitmarsh 2013; Coughlin, D'Ambrosia, Reimer & Pratt 2007; Hong, et al. 2020; Hsu & Lin 2016; Kim, Park & Choi 2017; Leong, Ping & Mutheveloo 2017; Mani & Chouk 2017; Mayer, Volland, Thiesse & Fleisch 2011; Paetz, Dütschke & Fichtner 2011; Pillai & Sivathanu 2020; Roy, Balaji, Quazi & Quaddus 2018). Studies conducted before 2015 focussed on the user acceptance of smart home technologies since the technology itself was not readily available. After 2015 however, consumer adoption and resistance as explicit constructs emerged as significant research areas, along with testing the dimensions that influence consumer adoption and resistance in various settings. Some studies have considered the adoption of or resistance to IoT services in homes (Hsu & Lin 2016; Hong, et al. 2020), smart devices available in the retail space (Roy et al. 2018), smart cities (Leong et al. 2017), or IoT adoption in agriculture (Pillai & Sivathanu 2020). However, very few have concentrated on smart household appliances specifically (Mani & Chouk 2017) or considered both adoption and resistance in the same study.

Adopting innovation constitutes a 'positive' decision to acquire and use innovation, while resistance is regarded as tantamount to non-adoption (Nabih, Bloem & Poiesz 1997). However, it is unclear whether consumer resistance is simply the obverse of adoption (Ram & Seth 1989), as resistance is overcome after during an innovation's lifecycle (Mani & Chouk 2017). Adoption occurs after the consumers' resistance to innovation has been overcome (Ram 1987) and is evident during the first phase of the innovation lifecycle. However, resistance and adoption can coexist during the lifecycle of an innovation lifecycle (Ram 1987), which necessitates exploring whether consumer resistance can be regarded as the obverse of adoption.

Purpose

By comparing a developed country (Germany) and a developing country (South Africa), this study aims to understand why smart household appliances have been resisted and have not been adopted to predicted levels. As most previous studies have focused on the adoption of IoTs, this study includes exploring both adoption of and resistance to IoTs to gain insight into whether adoption is indeed the opposite of resistance. Innovation and consumer characteristics are typically studied to understand why IoTs are resisted and not adopted. Other variables, such as the perceived risk of adoption and personality considerations, also play a role in this research. This study focuses on smart household appliances, considering the example of the smart refrigerator particularly.

Problem

There is a concern that the uptake of IoTs in households in developing countries such as South Africa has been comparatively slow due to inadequate digital infrastructure (Ghosh 2020) and the lower living standards in South Africa compared to those in Germany (Francesco & Gold 2005). Additionally, factors such as consumer and innovativeness characteristics (Mani & Chouk 2017), perceived risk (Hirunyawipada & Paswan 2006), and certain cultural conditions (Herbi & Dunphy 1998) also influence whether these innovations are adopted. These cultural conditions include uncertainty avoidance (Snelgar, Shelton & Giesser 2017) and the effect of collective nostalgia as a personality construct on cultural elements (Creighton 2015). Therefore, it is necessary to consider both consumer and innovativeness characteristics and the possible influence of particular cultural conditions when comparing a developing country to a developed one.

The research objectives that guide this paper are:

- To determine whether the innovation characteristics of perceived uselessness, perceived novelty, perceived price and intrusiveness influence consumer resistance to or adoption of smart household appliances.
- To establish whether the consumer characteristics of privacy concerns, dependence, and self-efficacy influence consumer resistance to or adoption of smart household appliances.
- To ascertain whether perceived risk, such as social and security risk, influence consumer resistance to or adoption of smart household appliances.
- To reveal whether the personality constructs of consumer innovativeness and nostalgia influence consumer resistance to or adoption of smart household appliances.

THEORETICAL FRAMEWORK

The theoretical framework of this study is based on the work of Ram and Sheth (1989) and Mani and Chouk (2017). They categorised the resistance to IoT adoption according to functional barriers caused by product (innovation) characteristics and psychological barriers resulting from consumer characteristics. To understand these barriers in a country-specific context, it is essential to consider the various constructs of consumer personality, such as consumer innovativeness (spirit of innovation) and nostalgia. These serve as indicators of buyer behaviour in the IoT context (Aldás-Manzano et al. 2008). Perceived risk is not only multidimensional but is also a potential deterrent to innovation adoption. The two risk dimensions most applicable to an IoT context are security risk (Leong et al. 2017) and social risk (Hirunyawipada & Paswan 2006).

A brief discussion of IoT, smart homes, and appliances follows, after which the resistance to and adoption of innovation are unpacked. There are various types of resistance to innovation and various types of resistance to innovation, and barriers to adoption. These are reviewed with specific reference to the dimensions of innovation resistance. The dimensions include innovation characteristics such as perceived uselessness, novelty, price and intrusiveness, and consumer characteristics such as privacy concerns, dependence and self-efficacy. However, some authors argue that specific types of perceived risks also influence resistance to innovation (Hirunyawipada & Paswan 2006; Leong et al. 2017; Ooi & Tan 2016). These are specifically social and security risks. While consumer resistance to innovation is influenced by innovation and consumer characteristics and perceived risks, there are two personality considerations or traits that may also affect resistance and adoption. Although consumer personality is not the only focus in this study, these two traits, namely innovativeness and nostalgia, could provide insight into consumer resistance to innovation when comparing a developed country with a developing country and taking cultural considerations into account. The first trait is domain-specific innovativeness which refers to the inclination to buy new products in a particular product category (such as smart appliances). The second trait is nostalgia, linked to a nation's identity and affects consumers' preference patterns. These are deliberated in the next sections.

IoT, smart homes and appliances

The Internet of Things is “the next evolution of the Internet that (1) incorporates billions of internet-connected sensors, cameras, wearables, smartphones and other smart IoT devices and (2) are capable of communicating and consulting with one another without human intervention” (Georgakopoulos & Jayaraman 2016:1043). It is considered a system in which objects, humans and other living things are connected through ‘smart’ technologies (Lupton 2020). The IoT consists of devices in healthcare, security and surveillance, infrastructure, transportation, retail and smart consumer and household devices (Yu, Bang, Lee & Lee 2016), the latter being the focus in this study. Smart homes consist of intelligent things, such as appliances, that are generally heterogeneous, resource-constrained and connected over low power networks (Yu et al. 2016). These smart homes are considered as a place of security and control; a site of activity.

A smart appliance is a material piece of equipment with the ability to communicate. It has a distinctive identifier, basic computing proficiencies and the ability to discover other pieces of equipment connected to the same network. The objects co-operate with humans and other objects or devices over the internet, allowing smart appliances to mix with the internet forming a vast network of related objects. This affords the consumer better suitability in bonding to and interacting with the system (Hsu & Lin 2016). Thus, smart household appliances are equipped with sensors that collect data about the environment and take action based on communication received from other entities through network connectivity, including Wi-Fi, Bluetooth, or Radio-frequency identification (RFID). The smart appliance market is diverse with several sectors such as health, mobility, lifestyle, wearables and smart household appliances, among others (Mani & Chouk 2017).

Smart appliances present a radical change from the original appliances that were available and are thus regarded as an innovation. According to Rogers (1995:1), an innovation is “an idea, practice or object that is perceived as new by an individual or other unit of adoption.” The characteristics of smart appliances include connectivity, intelligence and ubiquity. Connectivity means that smart appliances have communication protocols enabling the exchange of

information. Intelligence is evident in the ability of smart appliances to be autonomous and undertake actions based on captured data. They are ubiquitous as they may be used anywhere, anytime and from any device (Porter & Heppelmann 2014).

Various smart home product categories exist (Griffith & Colon 2019). These include smart household centres and controllers such as the Amazon Echo Family, smart household surveillance equipment, locks and home security systems, air conditioning, lighting, kitchen appliances, vacuums, smart health and fitness devices, and outdoor gadgets such as robotic lawnmowers. In South Africa, the smart appliance market is the second largest after security, while in Germany, it is the largest (Statista Smart Home Market Outlook: Germany & South Africa 2020). Germany's revenue in 2020 for smart home devices is 4th in the world being US\$4.344m, compared to South Africa, which is in 25th position being US\$366m. In Germany and South Africa, smart appliances are characterised by incremental innovations, adding new features to existing products. Relatively high product prices generate a high revenue, and those who already own smart appliances are more likely to purchase large, higher-priced appliances like refrigerators (Statista Smart Home Market Outlook: Germany & South Africa 2020). For this reason, the focus of this study is on smart household appliances, specifically smart refrigerators as consumers using a smart refrigerator already have some insight into how a smart appliance works.

Resistance to and adoption of smart household appliances

Consumers resist all kinds of innovations (Laukkanen 2016, Talwar, Talwar, Kaur & Khir 2020). Innovation resistance is "the resistance offered by consumers to innovation either because it poses potential changes from a satisfactory status quo or because it conflicts with their belief structure" (Ram & Seth 1989:1). Resistance to innovation is a behaviour that can block innovations from being successful, thus impacting the adoption rate (Mani & Chouk 2018; Talwar et al. 2020). It is, therefore, necessary to gain insight into the barriers leading to innovation resistance and limited adoption. Innovation and consumer characteristics are among those barriers (Mani & Chouk 2017), as well as the perceived risk (Hirunyawipada & Paswan 2006) and personality (Fauscette 2010) associated with the adoption of an innovation. These are discussed in the sections that follow.

Consumer resistance to and adoption of innovation

Resistance exists on a continuum and can either be passive, active or very active (Ram & Seth 1989). In passive resistance, the consumer, who is aware of the innovation, is reluctant or disinclined to adopt the innovation. If the resistance is active, the consumer may postpone the adoption decision as it is considered too risky. Very active resistance is demonstrated when the consumer engages in attacks against the adoption of the innovation, when the consumer is convinced that the innovation is unsuitable (Ram & Seth 1989; Mani & Chouk 2017). A consumer's predisposition to resist innovation results in passive resistance, whereas an unfavourable new product evaluation results in an attitudinal outcome and is considered active resistance (Talke & Heidenreich 2014). Active resistance will be the focus of this study.

Three forms of innovation resistance exist (Szmigin & Foxall 1998), namely rejection, postponement and opposition, the descriptions of which echo the explanations provided by Ram & Sheth (1989) and Mani & Chouk (2017). These provide for a more detailed description of innovation resistance. Rejection, similar to passive resistance, refers to the reluctance of consumers to adopt an innovation, which is not merely driven by a lack of awareness or ignorance but involves an ongoing evaluation by the consumer. This constant evaluation includes consumers being suspicious of new and untested innovations. Hirschheim & Newman (1988) found that rejection is often entangled with traditionalism (a reluctance to change; conservatism). When consumers postpone adopting an innovation, it is an active form of resistance in which adoption is delayed due to situational factors. Kleijnen, Lee & Wetzels (2009) describe postponement or active resistance as a state in which consumers find the innovation acceptable in principle but will wait until the circumstances (situation) are more suitable before they decide to adopt. Like very active resistance, opposition refers to a process in which a consumer may try an innovation before rejecting it, followed by

an attack through negative word-of-mouth (Szmigin & Foxall 1998; Kleijnen et al. 2009). This form of resistance to innovation can also be considered innovation sabotage, with consumers actively employing strategies to prevent the innovation from taking off. Due to the slower than expected uptake of smart household appliances (Eseye 2020), it may be argued that consumers display active resistance or postponement of the adoption of these appliances.

Dimensions of consumer resistance to and adoption of innovation

Several authors concur that active innovation resistance is created by product-specific barriers (Heidenrieck & Handrich 2015; Laukkanen, Sinkkonen & Laukkanen 2008; Molesworth & Suortfi 2002; Wiedmann, Hennigs, Pankalla, Kassubek & Seegebarth 2011). In addition, the typologies for the barriers to adoption differentiate between functional barriers and psychological barriers (Ram & Seth 1989; Talwar et al. 2020). Functional barriers include consumers observing a fundamental change when adopting a new appliance. These barriers encompass usage, value and risk. The usage barrier is evident when adopting a new appliance goes in opposition to consumer customs and habits. The value barrier emerges when a consumer believes that the innovation (smart appliance) does not provide a significant economic benefit compared to appliances currently available. The risk barrier relates to the potential risk of adopting an innovation, such as financial, physical, performance or social risks. Functional barriers are caused by smart appliance (innovation) characteristics such as perceived uselessness, perceived novelty, perceived price, and intrusiveness. These formed the constructs of the innovation characteristics dimension of this study.

Psychological barriers relate to a consumer's daily routines and the image associated with adopting an appliance, resulting from consumer characteristics such as self-efficacy, dependence, and privacy concerns (Ram 1987; Mani & Chouk 2017). These formed the constructs of the consumer characteristics dimension.

Innovation characteristics

Perceived usefulness is the "degree of improvement in a persons' performance when using a new technology" (Mani & Chouk 2017:83). This perception means that the more useful a smart appliance is to a consumer, the more likely they are to adopt it (Chang & Chen 2021). Perceived usefulness is how the consumer thinks they will benefit from using the smart appliance in the future (Tsourela & Nerantzaki 2020). Perceived novelty refers to how any innovation is considered unique or different, i.e. novel (Venkatraman & Price 1990). The novelty may be a significant change in the product idea or merely a change to the product's attributes. Previous research has found novelty to positively influence a consumer's attitude towards an IT innovation (Mani & Chouk 2017). Perceived price relates to how a consumer feels about the price of a product. It must be noted that the value of the new product influences how the price is perceived (Mani & Chouk 2017). The price value is a mental compromise between the smart appliance's perceived benefits and the cost of using them. When the benefits of using the smart appliance outweigh the monetary cost, the value derived from using the smart appliance positively influences how the monetary cost (price) is perceived (Leong et al. 2017). Intrusiveness typically has an adverse influence on consumers' behaviour as it causes unfavourable emotive responses such as irritation. Intrusion refers to the process whereby a product enters a consumer's life without permission. Smart appliances may be seen as intrusive as they can perform actions without the user's consent (Hoffman & Novak 2015). This ultimately leads to the question of whether the innovation characteristics of perceived uselessness, perceived novelty, perceived price and intrusiveness influence consumer resistance to or adoption of smart household appliances comparing Germany and South Africa. We posit that innovation characteristics negatively influence consumer resistance and positively influence consumer adoption of smart household appliances.

H₁: Innovation characteristics being, (a) perceived uselessness, (b) perceived novelty, (c) perceived price, and (d) intrusiveness, negatively influence consumer resistance to smart household appliances in Germany and South Africa.

H₂: Innovation characteristics being, (a) perceived uselessness, (b) perceived novelty, (c) perceived price, and (d) intrusiveness, positively influence consumer adoption of smart household appliances in Germany and South Africa.

Consumer characteristics

Consumer data privacy is a challenge (Mani & Chouk 2017) which is particularly evident in online transactions and which, in turn, will increase with the development of smart appliances. The characteristics of smart appliances include ubiquity, invisibility, pervasiveness and invasiveness. This is because they collect and manage private data and sensitive information (Sicari, Rizzardi, Grieco & Coen-Prisini 2015; Sletteameås 2009). There is a link between privacy concerns and intrusiveness. The more consumers feel sensitive about their privacy, the more they perceive the smart appliance to be intrusive (Mani & Chouk 2017). Consumers develop a dependence on the internet and computer-related technology (Hoffman, Novak & Venkatesh 2004), leading to 'technostress'. Technostress occurs when a person experiences direct or indirect negative attitudes or thoughts towards new technology or when technology influences their behaviour or how they feel physically. In the context of this study, dependence refers to consumers' reliance on technology to reach their goals. There is still the risk of causing seclusion as interaction with humans is substituted with interaction with devices (Mani & Chouk 2017). Self-efficacy refers to the perception a person has of their capability to use a technologically innovative product (Compeau & Higgins 1995), affecting resistance to technological innovation.

Interestingly, consumer resistance is negatively affected by self-efficacy (Ellen, Bearden & Sharma 1991) and positively impacts the adoption of innovation (Yangil & Chen 2007). If consumers feel more comfortable using a smart appliance, they will behave less oppositionally towards it (Mani & Chouk 2017). This then supports the question of whether the consumer characteristics of privacy concerns, dependence, and self-efficacy influence consumer resistance to or adoption of smart household appliances, comparing Germany and South Africa. We posit that consumer characteristics negatively influence consumer resistance and positively influence consumer adoption of smart household appliances.

H₃: Consumer characteristics being, (a) privacy concerns, (b) dependence, and (c) self-efficacy, negatively influence consumer resistance to smart household appliances in Germany and South Africa.

H₄: Consumer characteristics being, (a) privacy concerns, (b) dependence, and (c) self-efficacy, positively influence consumer adoption of smart household appliances in Germany and South Africa.

Perceived risk

Perceived risk may be detrimental to the adoption of innovation (Conchar, Zinkham, Peters & Olavarrieta 2004; Hirunyawipada & Paswan 2006). It is a function of the unexpected adoption results, followed by an outcome different from what was expected. The perceived risk may negatively influence the adoption of smart appliances as consumers may seek more information to alleviate the sensitivity towards risk or manage the perceived risk. Perceived risk is multidimensional, consisting of various categories of risks, such as financial, performance, privacy, psychological (Hong et al. 2020), and social (Hirunyawipada & Paswan 2006). For consumer electronics, such as smart appliances, social risk for example, may be very salient. This is because high-tech consumer electronics are used with friends and colleagues, and having the right appliance may be crucial for some consumers (Hirunyawipada & Paswan 2006).

Similarly, security risk may be prevalent in the smart environment (Leong et al. 2017). Security risk 'refers to the perception of protection against risk' (Ooi & Tan 2016:37) 'associated with IoT applications in a smart environment' (Leong et al. 2017: 445). This then supports the question of whether perceived risk such as social and security risk, influences consumer resistance to or adoption of smart household appliances, comparing Germany and South Africa. We posit that perceived risk negatively influence consumer resistance and positively influence consumer adoption of smart household appliances.

H₅: Perceived risk consisting of, (a) social and (b) security risk, negatively influence consumer resistance to smart household appliances in Germany and South Africa.

H₆: Perceived risk consisting of, (a) social and (b) security risk, positively influence consumer adoption of smart household appliances in Germany and South Africa.

Cultural and personality indicators influencing resistance to and adoption of innovation

Culture is human-made and thus communicated from one generation to another (Albaum, Strandkov & Duerr 2002). Hofstede (2001:9) stated that culture is “the collective programming of the mind that distinguishes the members of one group or category of people from another”. This means “that a national culture is a set of collective beliefs and values that distinguish people of one nation from those of another” (Schnalke & Mason 2014:172), which is also considered the personality of a region (Worthley, Macnab, Brislin & Rose 2009).

Geert Hofstede conceptualised six dimensions of culture: individualism, power distance, masculinity, uncertainty avoidance, long-term orientation, and indulgence (Hofstede n.d.). Snelgar et al. (2017) state that, based on Hofstede's six dimensions of culture, Germany and South Africa do not seem to have many differences. However, Francesco and Gold (2005) found that Germany demonstrated a higher uncertainty avoidance level than South Africa. Uncertainty avoidance refers to the degree to which members of a culture feel comfortable in unstructured situations. This means that Germans experience more anxiety and distrust when facing something unknown or new than South Africans.

Uncertainty avoidance does not imply risk avoidance but rather a desire to have fixed habits and rituals. This can influence consumer innovativeness, which is the “tendency to willingly embrace change and try new things and buy new products more often and more quickly than others” (Hirunyawipada & Paswan 2006:182). Consumer innovativeness increases innovation adoption (Foxall 1995; Aldás-Manzano et al. 2008; Seyed Esfahani & Reynolds 2021), and is a personality trait, also referred to as the spirit of innovation (Ailawadi, Neslin & Gedenk 2001). This is a personality trait whereby a person's behaviour towards a product is predicted by understanding the extent to which they are willing to try new things (Mowen 1999). In other words, their propensity to be among the first to try a new and novel product. The relationship between innovation and adoption can be categorised into different levels, namely global (personal trait), domain-specific innovativeness (narrowly defined trait towards product categories) and innovative behaviour. Adoption in the context of this study is a function of domain-specific consumer innovativeness (Hirunyawipada & Paswan 2006).

Innovativeness is associated with independence, extraversion, impulsivity, risk-taking, tolerance of ambiguity and flexibility. It is an individual's predisposition towards experimenting with new technologies (Ali, Khalid, Javed & Islam 2021). However, a person's behaviour is affected by these personality elements (their own makeup) and the norms and beliefs of the cultural environment. Consumers are members of a particular national culture that affects their attitudes and behaviours (Triandis 1989). These attitudes and behaviours are also affected by central and consumer-context-specific dispositions. Central dispositions apply to various situations, contexts, and behaviours, such as personal values.

In contrast, consumer-context-specific dispositions include consumer ethnocentrism and their attitude towards the past (nostalgia). This means that consumers in some countries may display a stronger disposition towards innovation than consumers in other countries, due to systematic differences in the national environment. A country's culture is a key environmental characteristic underlying these differences (Jan-Benedict, Steenkamp, Hofstede & Wedel 1999). In this study, consumer-context-specific dispositions are most relevant compared to the resistance to and adoption of Germany and South Africa's innovation. Consumer-context-specific dispositions have relevance in explaining consumer innovativeness and include a consumer's attitude toward the past in the form of nostalgia (Holbrook 2013).

Nostalgia is typically a longing for the past, a desire for former times, and a love for belongings and activities connected with earlier years. Collective nostalgia may involve a melancholic longing for the past and represents attempts for some aspects within cultures to inscribe or reinscribe forms of culture that were more desirable (Creighton 2015). As such, it is an important phenomenon that affects the preference patterns of consumers (Holbrook 1993). Holbrook & Schindler (1991:330) defined it as “a preference (general liking, positive attitude or favourable effect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood adolescence, in childhood, or even before birth).” Seifried & Meyer (2010) found harmony between IT innovations and nostalgia. Nostalgia is linked to a nation's identity, in that an intangible display of the nation's identity is promoted by nostalgia (Pajoutan & Seifried 2014). This then leads to the question of whether the personality constructs of consumer innovativeness and nostalgia, influence consumer resistance to or adoption of smart household appliances, comparing Germany and South Africa. We posit that the personality constructs of

consumer innovativeness and nostalgia negatively influence consumer resistance and positively influence consumer adoption of smart household appliances.

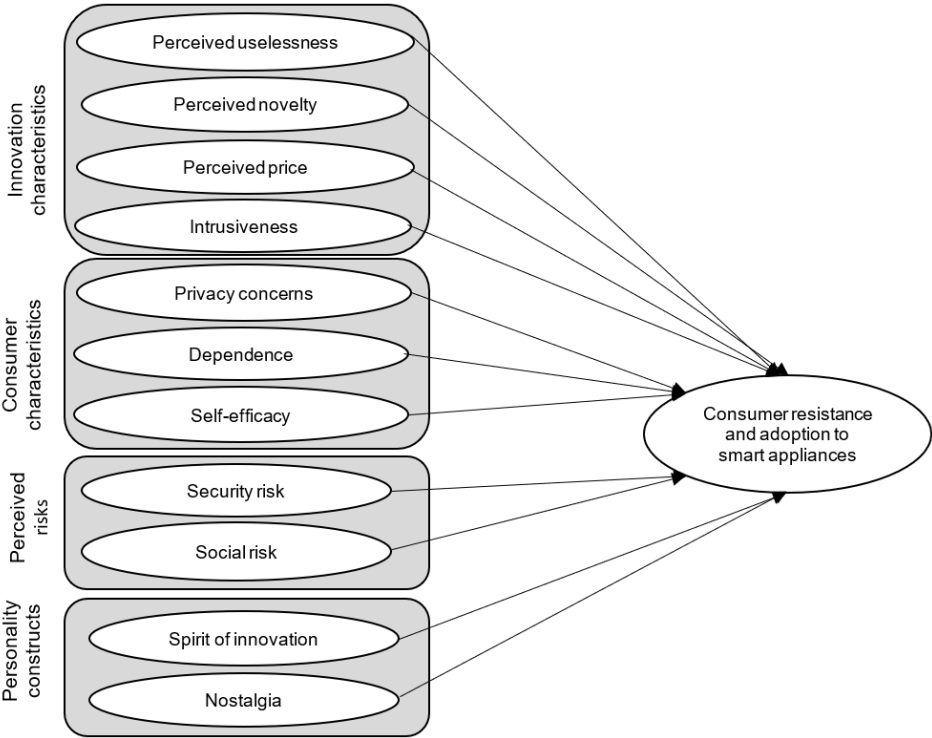
H₇: Personality constructs being, (a) consumer innovativeness and (b) nostalgia, negatively influence consumer resistance of smart household appliances in Germany and South Africa.

H₈: Personality constructs being, (a) consumer innovativeness and (b) nostalgia, positively influence consumer adoption of smart household appliances in Germany and South Africa.

The dimensions and constructs associated with this research are presented in Figure 1.

Place Figure 1 approximately here

FIGURE 1
THEORETICAL FRAMEWORK ASSOCIATED WITH CONSUMER RESISTANCE AND ADOPTION



RESEARCH STRATEGY

Data collection and sample characteristics

A quantitative research approach was adopted for this study. Non-probability sampling was applied using purposive sampling to reach a total of 1665 respondents. Of this, 974 respondents were from Germany and 691 were from South Africa. The research aimed to compare a developed country (Germany) with a developing country (South Africa) regarding consumers' resistance to and resultant adoption of smart household appliances.

Data were collected through an online questionnaire consisting of four parts. The first was a screening question to ensure that respondents were older than 18 and resided in the country in question. The second section was a welcome statement and description of smart refrigerators. Smart refrigerators were selected as the study's main smart household product as consumers in Germany and South Africa are familiar with them. The smart fridge can assist in food management and provide family connection and entertainment via push messages to smartphones or tablets through Amazon Alexa, Google Assistant, or Apple Siri. The third section consisted of the scale items using a 7-point Likert-type scale with anchors 1 (do not agree) to 7 (totally agree). The last section of the questionnaire included

demographic information and questions related to IoT usage. In Germany, a non-probability sample of respondents was recruited using purposive sampling to collect data. In South Africa, the services of Qualtrics XM were employed to assist with the recruitment of suitable respondents from South Africa. The result was a mixed sample consisting of different age and income classes.

Scale development

This study adapted the scale of resistance to smart appliances developed and tested by Mani & Chouk (2017). The constructs measured include the seven variables based on the conceptual framework developed by Mani & Chouk. The constructs are privacy concerns, perceived uselessness, self-efficacy, perceived price, intrusiveness, dependence, perceived novelty and resistance, and measuring consumer resistance as a construct (scale items adopted from the Mani & Chouk study). From their research, each of the constructs provided an acceptable or high Cronbach's Alpha score. The scale developed by Aldás-Manzano et al. (2008) was adopted for perceived risk, and only the variables of social and security risk were included. The scales for the personality constructs, consumer innovativeness and nostalgia, were adapted from Ailawadi, Neslin & Gedenk, (2001) and Holbrook (1993), respectively. Adoption was measured by asking respondents to provide the number of smart connected products they owned. According to this method, the actual adoption behaviour is reflected and has high reliability (Lastovicka & Joachimsthaler 1988; Hirunyawipada & Paswan 2006).

Results

Demographic description

All respondents were over 18 years of age, mostly female (58%) living with a partner in a shared apartment (59%) with access to the internet. The majority owned at least one smart connected product (90%), with little difference between Germans (85%) and South Africans (95%). In Germany, most responses were from 18 to 28-year-old consumers, while in South Africa, they were from 18 to 38-year-old consumers. In Germany, the majority of the respondents had a high school qualification or higher. In contrast, in South Africa, all but one of the respondents had a high school qualification or higher. Notably, the household income of respondents from Germany was lower than that of respondents in South Africa. The reason for this may be that a younger population participated in the study in Germany, while in South Africa, a panel was recruited to participate.

Descriptive statistics, Cronbach's Alphas and CFA

Considering the mean scores in Table 1, most of the respondents saw the smart refrigerator as useful, novel, priced high, and not intrusive. They had concerns regarding privacy and security but remained confident that they were self-efficient in using the appliance and were not concerned that they would depend on the technology. These respondents demonstrated a spirit of innovation, were somewhat nostalgic and had some resistance to the smart refrigerator, although they are likely to consider adopting it. When comparing Germany and South Africa, most Germans are more likely to resist smart refrigerators, while most South Africans are more likely to adopt them. The majority of German consumers perceived the smart refrigerator as more useful than their South African counterparts, while most South African consumers saw it as more novel. Most Germans viewed the price as higher than South Africans and found it more intrusive. They had more privacy concerns, while most South Africans were more confident in using the technology, although they were concerned that they might develop dependency. The majority of both Germans and South Africans had security concerns but were not worried that it might impact their social status. Most South Africans had a higher spirit of innovation, while the majority of both Germans and South Africans were mildly nostalgic about the past.

The Cronbach's Alphas, means and standard deviations of all constructs and items are reported in Table 1. Although the generally accepted value for a Cronbach's Alpha is 0.70 or above (Cortina 1993), a study by Taber (2018) on the use of Cronbach's Alpha reported Cronbach's Alphas of .45 and above as sufficient. With the exception

of the constructs of 'perceived novelty' and 'nostalgia', all scores were above 0.57, considered acceptable, moderate, adequate, reasonable and good.

TABLE 1
CRONBACH'S ALPHA, MEAN SCORES AND STANDARD DEVIATIONS

		N	A	Mean	Mean (Germany)	Mean (SA)	Std. Dev
Adoption	Suppose you need a new refrigerator how likely is it that you choose a smart fridge? I think smart refrigerators are generally good Willing to spend more on smart fridge compared to another fridge	1662	.729	4.07	3.42	4.99	1.81
Resistance	I'm likely to be opposed to the purchase of a smart fridge. I'm more critical of the promises of a smart refrigerator. The smart fridge is not for me.	1659	.775	3.99	4.36	3.46	1.58
Perceived uselessness	The features of a smart refrigerator offer few advantages. The functions of a smart refrigerator provide little added value.	1658	.573	3.99	3.96	4.05	1.47
Perceived Novelty	This smart fridge is unique The smart fridge is different compared to other fridges.	1657	.465	5.12	4.60	5.85	1.35
Perceived Price	The price of the smart fridge is high The price of the smart fridge is low (Recoded)	1152	.667	5.39	5.45	5.34	1.31
Intrusiveness	A smart fridge is intrusive i.e it is annoying. A smart fridge irritates me. The smart fridge is indiscreet i.e revealing things that should remain private. I'm not comfortable with the smart fridge. The smart fridge is disturbing i.e. causing anxiety.	1656	.867	3.43	3.61	3.17	1.48
Privacy Concerns	I am worried that my privacy will be affected. I am worried that my personal data will be collected from a smart fridge without my permission.	1664	.767	4.45	4.66	4.15	1.72
Dependence	I'm afraid of becoming dependent on the smart fridge. A smart fridge will limit my autonomy i.e. being independent. A smart fridge will limit my addiction to technology. I think my social life will suffer from the use of a smart refrigerator.	1657	.706	3.00	2.72	3.39	1.30
Self-Efficacy	I know how to use a smart fridge. I am confident that I can understand the use of the smart refrigerator. I think I am able to operate the smart fridge, although I've never used it before.	1658	.689	5.13	4.82	5.57	1.20
Security Risk	I worry about giving my personal data or login to smart connected product companies. When I send data to smart products companies, I am concerned that my data may also reach unauthorised third parties or hackers.	1660	.789	5.04	5.21	4.80	1.60
Social Risk	Using smart, internet-connected products degrades the picture my friends or relatives have of me. I'm afraid smart products do not offer the benefits promised on the website or by the manufacturer. It is very likely that smart products will not meet my expectations.	1658	.601	3.26	3.22	3.31	1.15
Innovativeness	If I see a product that differs from the conventional products, I try this out. I am often among the people who test a new product first. I like to try things that are new and different.	1659	.810	4.51	4.00	5.24	1.12
Nostalgia	Things used to be better in the good old days. Technological change will not secure a better future. Internet-connected products do not improve your daily life. The reliability of products used to be generally better.	1657	.590	3.58	3.56	3.60	1.14

A two-step approach was adopted to examine the reliability and validity of the constructs. First, a Confirmatory Factor Analysis (CFA) was performed, followed by multiple regression analysis. The CFA was run on a 32-question questionnaire that measured the influence of eleven variables on the resistance to and adoption of a smart household appliance among 1665 consumers. The suitability of CFA was assessed prior to analysis. The inspection of the correlation matrix showed nine variables that had at least one correlation coefficient greater than 0.3 (see Table 2). The two variables that could not be measured were privacy concerns and dependency and were therefore not included. For this reason the hypotheses associated with these consumer characteristics (H3a, H3b, H4a, H4b) are not reported on. Removing those variables from the CFA resulted in nine clear components with the overall Kaiser-Meyer-Olkin (KMO) measure of 0.93. According to Kaiser (1974), this measure is considered 'marvellous'. Bartlett's test of sphericity was statistically significant ($p < .0005$), indicating that the data was likely factorisable.

TABLE 2
ITEM LOADINGS

		Factor								
		1	2	3	4	5	6	7	8	9
Intrusiveness	A smart fridge is intrusive i.e it is annoying.	.663								
	A smart fridge irritates me.	.699								
	The smart fridge is indiscreet i.e revealing things that should remain private.	.749								
	I'm not comfortable with the smart fridge.	.752								
	The smart fridge is disturbing i.e. causing anxiety.	.648								
Innovativeness	If I see a product that differs from the conventional products, I try this out.		.802							
	I am often among the people who test a new product first.		.831							
	I like to try things that are new and different.		.706							
Self- Efficacy	I know how to use a smart fridge.			.623						
	I am confident that I can understand the use of the smart refrigerator.			.710						
	I think I am able to operate the smart fridge, although I've never used it before.			.808						
Social Risk	Using smart, internet-connected products degrades the picture my friends or relatives have of me.				.616					
	I'm afraid smart products do not offer the benefits promised on the website or by the manufacturer.				.484					
	It is very likely that smart products will not meet my expectations.				.499					
Nostalgia	Things used to be better in the good old days.					.785				
	Technological change will not secure a better future.					.538				
	Internet-connected products do not improve your daily life.					*				
	The reliability of products used to be generally better.					.739				
Security Risk	I worry about giving my personal data or login to smart connected product companies.						.783			
	When I send data to smart products companies, I am concerned that my data may also reach unauthorised third parties or hackers.						.850			
Perceived Price	The price of a smart refrigerator is high							.831		
	The price of a smart refrigerator is low.							-.861		
Perceived uselessness	The features of an intelligent refrigerator offer few advantages.								.803	
	The functions of a smart refrigerator offer little added value.								.749	
Perceived Novelty	This smart fridge is unique.									.467
	A smart refrigerator is different from other refrigerators.									.881

*Loading below 0.3

The CFA was followed by multiple regression analysis to measure the extent to which resistance to and adoption of smart appliances are explained by the independent variables applicable to this study. First, the analysis was conducted with a combined data set for both Germany and South Africa. This was followed by another analysis for each of the dependent variables for Germany and South Africa respectively.

Multiple regression

Resistance to smart household appliances

With an adjusted r^2 of 64,7%, the statistics for resistance are robust (see Table 3). With the exception of the dimension of social risk (0,093), the total regression and the predictors are highly significant. Similar to adoption, the most substantial influence can be found for intrusiveness (+0,392**) and perceived uselessness (0,207**), whereas social risk (0,114**), price (+0,066**) and nostalgia (+0,037**) show much lower β -values. As an analogue of adoption, the personal spirit of innovation (-0,160**) and perceived novelty (-0,101**) also have the most substantial adverse influence on resistance. All premises of the regressions are fulfilled. The plot of the standardised residuals against the standardised predicted values shows only a very slight indicator of heteroscedasticity, and the Durbin-Watson value is 1,90. Therefore, autocorrelation and tolerance values are all above 0,49 with no multicollinearity, and the plot of the standardised residuum shows a nearly normal distribution.

TABLE 3
MULTIPLE REGRESSION RESULTS FOR RESISTANCE (COMBINED DATA SET)

Resistance	B	95% CI for B		SE B	β	t	Sig.	R ²	ΔR^2
		LB	UB						
Model								.649	.647
Constant	1.949	1.507	2.392	.226		8.641	.000		
Perceived uselessness	.212	.175	.249	.019	.207	11.237	.000		
Perceived novelty	-.161	-.160	-.072	.022	-.101	-5.177	.000		
Perceived price	.076	-.037	.115	.020	.066	3.817	.000		
Intrusiveness	-.419	.368	.471	.026	.392	16.006	.000		
Self-efficacy	-.069	-.121	-.018	.026	-.054	3.653	.000		
Security risk	.069	.032	.106	.019	.073	4.845	.000		
Social risk	.147	.087	.206	.030	.114	1.683	.093		
Spirit of innovation	-.175	-.222	-.128	.024	-.160	-7.345	.000		
Nostalgia	.048	-.008	.104	.029	.037	-2.636	.008		

Note. Model – “Enter” methods in SPSS Statistics; B – unstandardized regression coefficient; CI = confidence interval; LB = Lower Bound; UB = Upper Bound; SE B = standard error of the coefficient; β = standardized coefficient; R² = coefficient of determination; ΔR^2 = adjusted R².

Resistance to smart household appliances: Germany vs South Africa

The analysis of the resistance to smart household appliances differentiated by country shows similar results as the integrated analysis (see Table 4). As it is with adoption, Germany (69,7%) shows a higher adjusted r^2 than South Africa (59,6%) for resistance. Once again, the dimension with the most critical positive factor is the same for both Germany and South Africa, namely intrusiveness, with Germany at +0,402**, and South Africa at +0,314**. The second most crucial dimension is perceived uselessness for Germany (+0,313**), and social risk (+0,225**) for South Africa respectively. As in the country integrated regression, the spirit of innovation shows the most significant negative influence in the separated regression (Germany -0,132** / South Africa -0,134**). In Germany, this is followed by perceived novelty (-0,047**) as the overall regression, whereas in South Africa, self-efficacy (-0,073*) ranks at number two.

All premises of the regressions for resistance in Germany are fulfilled. The plot of the standardised residuals against the standardised predicted values shows no serious indicator of heteroscedasticity, and the Durbin-Watson value is 2,01. Therefore, autocorrelation and tolerance values are all above 0,47, indicating no multicollinearity, and the plot of the standardised residuum shows a nearly normal distribution. All premises of the regressions for resistance in South Africa are fulfilled. The plot of the standardised residuals against the standardised predicted values shows only very slight indicators of heteroscedasticity, and the Durbin-Watson value is 1,89. Autocorrelation and tolerance values are all above 0,41, indicating no multicollinearity, and the plot of the standardised residuum shows a nearly normal distribution.

TABLE 4
MULTIPLE REGRESSION RESULTS FOR RESISTANCE (GERMANY VS. SA)

Germany

Resistance	B	95% CI for B		SE B	β	t	Sig.	R ²	ΔR^2
		LB	UB						
Model								.701	.697
Constant	.976	.234	1.718	.387		2.583	.010		
Perceived uselessness	.369	.302	.437	.032	-.313	10.758	.000		
Perceived novelty	-.060	-.125	.005	.033	-.047	-1.806	.071		
Perceived price	-.121	.060	.181	.031	.096	3.928	.000		
Intrusiveness	.443	.372	.514	.036	.402	12.256	.000		
Self-efficacy	-.049	-.120	.021	.036	-.037	2.674	.008		
Security risk	.075	.020	.130	.028	.071	2.228	.26		
Social risk	.105	.012	.198	.047	.070	.300	.764		
Spirit of innovation	-.169	-.238	-.101	.035	-.132	-4.860	.000		
Nostalgia	.013	-.073	.100	.044	.009	-1.374	.170		

South Africa

Resistance	B	95% CI for B		SE B	β	t	Sig.	R ²	ΔR^2
		LB	UB						
Model								.601	.596
Constant	1.803	1.165	2.440	.325		5.551	.000		
Perceived uselessness	.133	.090	.185	.022	.157	6.143	.000		
Perceived novelty	-.034	-.102	.034	.035	-.028	-.994	.320		
Perceived price	.020	-.029	.069	.025	.020	.805	.421		
Intrusiveness	.309	.236	.382	.037	.314	8.306	.000		
Self-efficacy	-.092	-.167	-.017	.038	-.073	2.330	.020		
Security risk	.057	.009	.105	.024	.071	6.267	.000		
Social risk	.239	.164	.314	.038	.225	3.148	.002		
Spirit of innovation	-.138	-.202	-.074	.033	-.134	-4.239	.000		
Nostalgia	.114	.043	.185	.036	.104	-2.421	.016		

Note. Model – “Enter” methods in SPSS Statistics; B – unstandardized regression coefficient; CI = confidence interval; LB = Lower Bound; UB = Upper Bound; SE B = standard error of the coefficient; β = standardized coefficient; R² = coefficient of determination; ΔR^2 = adjusted R².

Adoption of smart household appliances

The regression of the integrated data for both Germany and South Africa, with all seven dimensions as independent variables and adoption as dependent variable, shows a satisfying adjusted r^2 of 48,6% (see Table 5). The complete

regression and all Beta values show significant or highly significant results, apart from security risk, which is slightly insignificant (0,056). All Beta values show plausible results with a standardised β of -0,348**. Intrusiveness has the most significant negative influence on adoption, followed by perceived price (-0,123**) and perceived uselessness (-0,107**). The most substantial positive impact is identified in the personal spirit of innovation (+0,252**), followed by perceived novelty (+0,197**). All premises of the regressions are fulfilled. The plot of the standardised residuals plot the standardised predicted values shows no indicator of heteroscedasticity, and the Durbin-Watson value is 1,83. Autocorrelation and tolerance values are therefore all above 0,46, with no multicollinearity. The plot of the standardised residuals shows a nearly normal distribution.

TABLE 5
MULTIPLE REGRESSION RESULTS FOR ADOPTION (COMBINED DATA SET)

Adoption	B	95% CI for B		SE B	β	t	Sig.	R ²	ΔR^2
		LB	UB						
Model								.489	.486
Constant	3.312	2.684	3.941	.320		10.339	.000		
Perceived uselessness	-.128	-.181	-.076	.027	-.107	-4.801	.000		
Perceived novelty	.267	.205	.329	.032	.197	8.411	.000		
Perceived price	-.166	-.222	-.110	.028	-.123	-5.851	.000		
Intrusiveness	-.438	-.511	-.365	.037	-.348	-11.774	.000		
Self-efficacy	.116	.042	.189	.037	.077	01.909	.056		
Security risk	-.051	-.104	.001	.027	-.046	2.021	.044		
Social risk	.087	.003	.171	.043	.057	2.227	.026		
Spirit of innovation	.323	.257	.390	.034	.252	9.557	.000		
Nostalgia	.090	.011	.170	.041	.059	3.090	.002		

Note. Model – “Enter” methods in SPSS Statistics; B – unstandardized regression coefficient; CI = confidence interval; LB = Lower Bound; UB = Upper Bound; SE B = standard error of the coefficient; β = standardized coefficient; R² = coefficient of determination; ΔR^2 = adjusted R².

Adoption of smart household appliances: Germany vs South Africa

If the regression on adoption is considered separately for Germany and South Africa, Germany shows a higher adjusted r^2 of 55,6% than South Africa at 38,8% (see Table 6). The influence of the most important variables remains the same, although intrusiveness has the most significant negative influence on adoption in both Germany and South Africa (Germany -0,370** / RSA -0,291**). The second most crucial factor is different for Germany and South Africa. In Germany it is perceived uselessness (-0,297**), and in South Africa it is perceived price (-0,150**), so the price of the smart appliance has a much stronger influence in South Africa than in Germany. All premises of the regressions for adoption in Germany are fulfilled. The plot of the standardised residuals against the standardised predicted values shows no serious indicator of heteroscedasticity, and the Durbin-Watson value is 2,01. Autocorrelation and tolerance values are all above 0,47. Therefore, no multicollinearity is present, and the standardised residuum plot shows a nearly normal distribution. All premises of the regressions for adoption in South Africa are fulfilled. The plot of the standardised residuals against the standardised predicted values shows no serious indicator of heteroscedasticity, and the Durbin-Watson value is 1,87. Autocorrelation and tolerance values are all above 0,41. Therefore, there is no multicollinearity present, and the plot of the standardised residuum shows a nearly normal distribution.

The ranking of the dimension with the biggest positive influence shows no difference between the two countries. They are the same as in the country integrated regression, with personal spirit of innovation (Germany +0,158** / RSA 0,240**), followed by the perceived novelty (Germany +0,073** / RSA +0,114**).

TABLE 6
MULTIPLE REGRESSION RESULTS FOR ADOPTION (GERMANY VS. SA)

Germany									
Adoption	B	95% CI for B		SE B	β	t	Sig.	R²	ΔR^2
		LB	UB						
Model								.519	.556
Constant	5.631	4.725	6.537	.461		12.208	.000		
Perceived uselessness	-.355	-.437	-.272	.042	-.297	-8.562	.000		
Perceived novelty	.094	.015	.174	.041	.073	2.324	.020		
Perceived price	-.116	-.189	-.042	.038	-.091	-3.073	.002		
Intrusiveness	-.412	-.499	-.326	.044	-.370	-9.333	.000		
Self-efficacy	.059	-.027	.145	.044	.043	-1.861	.063		
Security risk	-.064	-.131	.001	.034	-.060	.209	.834		
Social risk	.012	-.101	.125	.058	.008	.689	.491		
Spirit of innovation	.204	.121	.288	.043	.158	4.801	.000		
Nostalgia	.037	-.069	.143	.054	.025	1.342	.180		
South Africa									
Adoption	B	95% CI for B		SE B	β	t	Sig.	R²	ΔR^2
		LB	UB						
Model								.347	.338
Constant	3.844	2.824	4.864	.519		7.401	.000		
Perceived uselessness	-.063	-.131	.004	.035	-.060	-1834	.067		
Perceived novelty	.178	.069	.286	.055	.114	3.216	.001		
Perceived price	-.185	-.264	-.107	.040	-.150	-4656	.000		
Intrusiveness	-.358	-.475	-.241	.059	-.291	-6.016	.000		
Self-efficacy	.132	.012	.252	.061	.083	-.772	.440		
Security risk	-.030	-.107	.046	.039	-.030	.691	.490		
Social risk	.042	-.078	.162	.061	.032	.667	.449		
Spirit of innovation	.310	.207	.412	.052	.240	5.928	.000		
Nostalgia	.039	-.074	.152	.058	.029	2.168	.030		

Note. Model – “Enter” methods in SPSS Statistics; B – unstandardized regression coefficient; CI = confidence interval; LB = Lower Bound; UB = Upper Bound; SE B = standard error of the coefficient; β = standardized coefficient; R² = coefficient of determination; ΔR^2 = adjusted R².

Hypothesis

The hypothesis and results are outlined as follows:

H₁: Innovation characteristics being, (a) perceived uselessness, (b) perceived novelty, (c) perceived price, and (d) intrusiveness, negatively influence consumer resistance to smart household appliances in Germany and South Africa.

H₂: Innovation characteristics being, (a) perceived uselessness, (b) perceived novelty, (c) perceived price, and (d) intrusiveness, positively influence consumer adoption of smart household appliances in Germany and South Africa.

From Table 3 and 5 it is evident that H1b (-0.161), H1d (-0.419) and H2c (0.267) are supported and addresses research objective 1.

H₃: Consumer characteristics being, (a) privacy concerns, (b) dependence, and (c) self-efficacy, negatively influence consumer resistance of smart household appliances in Germany and South Africa.

H₄: Consumer characteristics being, (a) privacy concerns, (b) dependence, and (c) self-efficacy, positively influence consumer adoption of smart household appliances in Germany and South Africa.

Tables 3 and 5 show that H3c (-0.069) and H4c (0.116) are supported. H3a and H3b as well as H4a and B could not be tested. This addresses research objective 2.

H₅: Perceived risk consisting of, (a) social and (b) security risk, negatively influence consumer resistance of smart household appliances in Germany and South Africa.

H₆: Perceived risk consisting of, (a) social and (b) security risk, positively influence consumer adoption of smart household appliances in Germany and South Africa.

Tables 3 and 5 show that H6b (0.087) is supported and addresses research objective 3.

H₇: Personality constructs being, (a) consumer innovativeness and (b) nostalgia, negatively influence consumer resistance of smart household appliances in Germany and South Africa.

H₈: Personality constructs being, (a) consumer innovativeness and (b) nostalgia, positively influence consumer adoption of smart household appliances in Germany and South Africa.

From Table 3 and 5 it is evident that H7a (-0.175) and H8a (0.323) and H8b (0.090) are supported and addresses research objective 4.

DISCUSSION

Product-specific barriers create resistance caused by innovation (represented by smart appliances) and consumer characteristics. Although it was expected that consumer characteristics (namely privacy concerns, dependence and self-efficacy) might influence the resistance to and adoption of smart appliances, privacy concerns and dependence did not yield satisfactory results, indicating that they are more complex than initially thought. Self-efficacy did yield satisfactory results, but the regression analysis did not significantly influence either the resistance to or adoption of smart appliances in the combined analysis. It did, however, have a negative influence on resistance in South Africa.

Consumers from both Germany and South Africa found intrusiveness to be the most significant influence on both their resistance to the smart household appliance and their resultant adoption. When the data from Germany and South Africa are combined, intrusiveness still has the most significant influence. Hoffman & Novak (2015) found that intrusiveness typically negatively impacts the behaviour of consumers and makes them feel irritated. In South Africa, social risk also influences the resistance to smart household appliances, while in Germany, the perceived uselessness and novelty were evident. South African consumers' adoption is affected by perceived price, while perceived uselessness still played a role for their German counterparts. It is, therefore interesting that for German consumers, intrusiveness and perceived uselessness influenced both the resistance to and adoption of smart appliances, in addition to novelty, which only influenced resistance. This indicates that resistance is not merely the obverse of adoption (Ram & Seth 1989).

For South African consumers, intrusiveness, social risk, and self-efficacy affect their resistance to smart appliances, while intrusiveness and perceived price influence adoption. It is clear from the results that there is a difference between a developed and developing country regarding why smart appliances are resisted and not adopted to the predicted levels. For a developing country, perceived price affects the adoption of IoTs in the home, reflecting the lower living standards in South Africa, compared to Germany (Francesco & Gold 2005). Interestingly, social risk influences resistance to smart appliances in a developing country. Hirunyawipada & Paswan (2006) found that high-tech consumer electronics are used with friends and colleagues. South African consumers seem to feel that their social standing is at risk for not having the latest smart appliance, causing them to resist it altogether. In South Africa, resistance is affected by intrusiveness and social risk, while adoption is influenced by intrusiveness and perceived price. Resistance is the behaviour that precedes adoption, and during active resistance, the adoption decision is postponed (Mani & Chouk 2017) due to situational factors. These factors are possibly affordability (price) (Hirschheim & Newman 1988) or the intrusiveness of the product.

When the data for both countries are combined, intrusiveness, perceived uselessness, and perceived price influence resistance. All constructs of innovation characteristics, namely intrusiveness, perceived uselessness, perceived price and perceived novelty, influence the resistance to smart appliances. This means that although there are slight differences between the two countries, intrusiveness, perceived uselessness, and perceived novelty, as innovation characteristics, are overall the most important reasons for the resistance to and the adoption of smart household appliances.

An individual's personality toward specific buying behaviour is portrayed through a combination of personality characteristics (Mowen 1999). For this reason, personality characteristics need to be explored to understand the barriers caused by innovation and consumer characteristics in a country-specific context. These characteristics are measured through a consumer's personality constructs. The personality constructs applicable to this research are consumer innovativeness (spirit of innovation) and nostalgia. Persons with a strong spirit of innovation are risk-takers who increase innovation adoption (Aldás-Manzano et al. 2008). The spirit of innovation negatively influenced consumer resistance and positively influenced adoption for the country-specific and combined data. This means that consumers from both developed and developing countries have a strong spirit of innovation (consumer innovativeness) and are likely to adopt smart appliances based on this personality construct. For South Africans, however, the spirit of innovation influenced resistance (negatively) and adoption (positively) slightly more than for Germans. The spirit of innovation (consumer innovativeness) is influenced by the cultural dimension of uncertainty avoidance, where Germans have a higher level of uncertainty avoidance than their South African counterparts. This thus supports the notion that South Africans have a stronger spirit of innovation in line with their lower levels of uncertainty avoidance.

CONCLUSION

The emergence of smart appliances as part of the growing IoT industry is changing how we interact with the world. However, the uptake of these IoT devices is slower than expected, especially in developing countries, where there is little emphasis placed on smart household appliances. Some of the reasons for this resistance to and adoption of smart appliances are located in the characteristics of both the smart appliance and the consumers. For the consumers, these include those characteristics related to personality. Insights from consumers from Germany and South Africa revealed that the features of the smart appliance influence both the resistance to and adoption of the smart appliance. Resistance is influenced by how intrusive the smart appliance is, how the consumer perceives its usefulness and whether it is considered novel or new. Adoption is influenced by how intrusive the smart appliance is, how it is perceived in terms of usefulness, whether it is deemed novel, and how the consumer perceives the price. Only South African consumers' perception of their capability to use a technologically innovative product influences their resistance to the smart appliance. The reasons for the resistance to and adopting smart appliances differ when comparing a developed and developing country. Overall, it was found that adoption is not the inverse of resistance. Although the influence of consumer characteristics on the resistance to and adoption of smart appliances is inconclusive, the personality construct of consumer innovativeness (spirit of innovation) plays a significant role in both Germany and South Africa. The cultural dimension of uncertainty avoidance influenced the spirit of innovation. South Africans' spirit of innovation influences their resistance to and adoption of smart appliances more strongly than their German counterparts.

The importance of the research is fourfold: Firstly, the comparison of a developed country to a developing country to understand the reasons why IoTs have been resisted and not adopted to the expected levels provides the basis for further research to be conducted among more developed and developing countries. This will ascertain whether this phenomenon extends beyond the two countries included in this study and provide a basis for more generalizable results. Understanding the nuances of resistance and adopting smart appliances comparing a greater sample of developed and developing countries has implications for technology developers and marketers. Secondly, although all of the innovation characteristics were found to influence the resistance to and adoption of IoTs, intrusiveness was found to be more significant all around. Further research is needed to understand this particular construct, thereby providing insight to IoT organisations in finding ways to overcome this. Thirdly, uncovering that IoT adoption is not merely the inverse of resistance, and especially discovering the particular reasons for each of these, is significant. As some of the results for consumer characteristics were inconclusive, further research is needed to understand the

complexities of privacy concerns and dependence. Fourthly, discovering that the personality construct of the spirit of innovation significantly influences resistance negatively and adoption positively recognises that personality may influence consumer characteristics and warrants further exploration.

It is recommended that the industries associated with IoTs, more specifically smart appliances, take cognisance of their innovations' characteristics to curb the resistance to these innovations and encourage adoption. The intrusiveness of technological innovations needs to be limited, allowing consumers to feel more comfortable using and adopting smart appliances. The seamless integration of these appliances with a consumer's life is necessary for increased adoption. Similarly, the uselessness, price and novelty need to be balanced with limiting the smart appliance's intrusiveness. Understanding consumers remain pivotal in encouraging the adoption of smart appliances. Apart from the needs of consumers such as protecting their privacy, ensuring they remain independent from the technology and their ability to handle the technology, their propensity to take risks and try new things are likely to play a significant role in acquiring smart appliances.

REFERENCES

- Ailawadi, K. L., Neslin, Sc. A. & Gedenk, K. 2001. 'Pursuing the value-conscious consumer: store brands versus national brand promotions', *Journal of Marketing*, 65: 71-89.
- Albaum, G., Strandkov, J. & Duerr, E. 2002. *International Marketing and Export Management*, Fourth Edition. Harlow: Prentice Hall.
- Aldás-Manzano, J., Lassala-Navarré, C., Ruiz-Mafé, C. & Sanz-Blas, S. 2008. 'The role of consumer innovativeness and perceived risk in online banking usage', *International Journal of Bank Marketing*, 27(1): 53-75.
- Ali, S., Khalid, N., Javed, H.M.U. & Islam, D.M.Z. 2021. 'Consumer Adoption of Online Food Delivery Ordering (OFDO) Services in Pakistan: The Impact of the COVID-19 Pandemic Situation', *Journal of Open Innovation: Technology, Market, and Complexity*, 7(10) <https://doi.org/10.3390/joitmc7010010>.
- Ancarani, A., Di Mauro, C., Legenvre, H. & Cardella, M. S. 2020. Internet of things adoption: a typology of projects, *International Journal of Operations and Production Management*, 40(6): 849-872.
- Balaji, M. S. & Roy, S. K. 2017. 'Value co-creation with Internet of things technology in the retail industry', *Journal of Marketing Management*, 33(1-2): 7-31.
- Balta-Ozkan, N., Davidson, R., Bicket, M. & Whitmarsh, L. 2013. 'Social barriers to the adoption of smart homes', *Energy Policy*, 63: 363-374.
- Chang, Y. & Chen, J. 2021. 'What motivates customers to shop in smart shops? The impacts of smart technology and technology readiness', *Journal of Retailing and Consumer Services*, 58: 102325.
- Creighton, M. 2015. 'Anthropology of Nostalgia'. In Wright, J. *International Encyclopedia of the Social & Behavioral Sciences*, Second Edition. Elsevier.
- Compeau, D. & Higgins, C. A. 1995. 'Computer self-efficacy: Development of a measure and initial test', *MIS Quarterly*, 19(2): 189-211. doi:10.2307/249688.
- Conchar, M.P., Zinkhan, G.M., Peters, C. & Olavarrieta, S. 2004. 'An integrated framework for the conceptualisation of consumers' perceived-risk processing', *Journal of the Academy of Marketing Science*, 32(4): 418-36.
- Cortina, J. M. 1993. 'What is coefficient alpha? An examination of theory and applications', *Journal of applied psychology*, 78(1): 98.
- Coughlin, J. F., D'Ambrosio, L. A., Reimer, B. & Pratt, M. R. 2007. 'Older adult perceptions of smart home technologies: Implications for research, policy and market innovations in healthcare', *Proceedings of the 29th Annual International Conference of the IEEE EMBA, Cité Internationale, Lyon, France. August 23-26, 2007*.

- Cho, D., Kwon, H. & Lee, H. 2007. 'Analysis of trust in mobile commerce adoption. Proceedings of the 40th Hawaii International Conference on System Science, Kauai, HI: 1-10.
- Ellen, P. S., Bearden, W. O. & Sharma, S. 1991. 'Resistance to technological innovations. An examination of the role of self-efficacy and performance satisfaction'. *Journal of the Academy of Marketing Science*, 19(4): 297–307.
- Eseye. 2020. '2020 and beyond: What's next for IoT?' Available at: https://www.eseye.com/2020-iot-predictions/?gclid=Cj0KCQjwgJv4BRCrARIsAB17JI4OF-3gukrpvEC9TAzxImucrMaFyEvPK4baHuHUU9wDFz2kGzafVtkaArbREALw_wcB (Accessed: 12 June 2020).
- Francesco, A.M. & Gold, B.A. 2005. *International organisational behaviour*, Second Edition. Upper Saddle River, NJ: Pearson Prentice Hall.
- Ghosh, J. 2020. 'Digital challenges for developing countries' In *Recovering better: economic and social challenges and opportunities*. Available at: https://www.un.org/development/desa/en/wp-content/uploads/2020/07/RECOVER_BETTER_0722-1.pdf (Accessed: 25 January 2020).
- Heidenreich, S. & Mandrich, M. 2014. 'What about passive innovation resistance? Investigating adoption-related behaviour from a resistance perspective', *Journal of Product Innovation Management*, 32(6): 878-903.
- Hirschheim, R. & Newman, M. 1988. 'Information systems and user resistance. Theory and practice', *The Computer Journal*, 31(5): 398–408.
- Hirunyawipada, T. & Paswan, A. 2006. 'Consumer innovativeness and perceived risk: implications for high technology product adoption', *Journal of Consumer Marketing*, 23(4): 182-98.
- Hoffman, D. L. & Novak, T. P. 2015. 'Emergent experience and the connected consumer in the smart home assemblage and the Internet of Things'. Available at: <https://www.semanticscholar.org/paper/Emergent-Experience-and-the-Connected-Consumer-in-Hoffman-Novak/fbef72e97380f701b36b5c20dff5ecf19d24dbdc> (Accessed: 12 June 2020).
- Hoffman, D. L., Novak, T. P. & Venkatesh, A. 2004. 'Has the Internet become indispensable?', *Communications of the ACM*, 47(7): 37–42. doi:10.1145/1005817.1005818.
- Hofstede, G. 2001. *Culture's Consequences: Comparing Values, Behaviours, Institutions, and Organisations Across Nations*, Second Edition. Thousand Oaks: Sage Publications.
- Hofstede, G. n.d. The 6-D model of national culture. Available at: <https://geerthofstede.com/culture-geert-hofstede-gert-jan-hofstede/6d-model-of-national-culture/> (Accessed: 2 February 2021).
- Holbrook, M. B. 1993. 'Nostalgia and consumption preferences: some emerging patterns of consumer tastes', *Journal of Consumer Research*, 20: 245-256.
- Holbrook, M. B. & Schindler, R. M. 1991. 'Echoes of the dear departed past: Some work in progress on nostalgia', In Holman, R. H. & Solomon, M. R. (eds) *Advances in Consumer Research*, Vol. 18, Association for Consumer Research, Provo, UT, 330–333.
- Hong, A., Nam, C., & Kim, S. 2020. 'What will be the possible barriers to consumers' adoption of smart home services?', *Telecommunications Policy*, 44(2). <https://doi-org.ujlink.uj.ac.za/10.1016/j.telpol.2019.101867>.
- Hsu, C. & Lin, J. C. 2016. 'An empirical examination of consumer adoption of Internet of Things services: Network externalities and concern of information privacy perspectives', *Computers in Human Behavior*, 62: 516-527.
- Jan-Benedict E. M. Steenkamp, Hofstede, F., & Wedel, M. 1999. 'A Cross-National Investigation into the Individual and National Cultural Antecedents of Consumer Innovativeness', *Journal of Marketing*, 63(2): 55-69. doi:10.2307/1251945.
- Kenneth, W., Rebecca, M. N. & Eunice, A. 2012. 'Factors affecting adoption of electronic commerce among small medium enterprises in Kenya: Survey of Tour and Travel firms in Nairobi', *International Journal of Business, Humanities and Technology*, 2(4): 76 – 91.

- Kleijnen, M., Lee, N. J. & Wetzels, M. 2009. 'An exploration of consumer resistance to innovation and its antecedents', *Journal of Economic Psychology*, 30(3): 344–357. doi:10.1016/j.joep.2009.02.004.
- Kim, Y., Park, Y. & Choi, J. 2017. 'A study on the adoption of IoT smart home service: using value-based adoption model', *Total Quality Management and Business Excellence*, 28(9-10): 1149-1165.
- Laukkanen, P., Sinkkonen, S. & Laukkanen, T. 2008. 'Consumer resistance to Internet banking: Postponers, opponents and rejectors', *International Journal of Bank Marketing*, 26(1): 440–55.
- Laukkanen, T. 2016. 'Consumer adoption versus rejection decisions in seemingly similar service innovations: the case of the Internet and mobile banking', *Journal of Business Research*, 69(7): 2432–2439.
- Leong, G. W., Ping, T. A. & Muthuveloo, R. 2017. 'Antecedents of behavioural intention to adopt Internet of Things in the context of smart city in Malaysia', *Global Business and Management Research: An International Journal*, 9(4): 442-456.
- Lupton, D. 2020. 'The Internet of Things: Social dimensions', *Sociology Compass*, 14: e12770. <https://doi.org/10.1111/soc4.12770>.
- Mani, Z. & Chouk, I. 2017. 'Drivers of consumers' resistance to smart appliances', *Journal of Marketing Management*, 33(1-2): 76-97.
- Mani, Z. & Chouk, I. 2018. 'Smart banking: Why it's important to take into account consumers' concerns?', *Archive ouverte en Sciences de l'Homme et de la Société*. Available at: <https://halshs.archives-ouvertes.fr/halshs-01678806> (Accessed: 9 June 2020).
- Mayer, P., Volland, D., Thiesse, F. & Fleisch, E. 2011. 'User acceptance of 'Smart Appliances': An empirical investigation', *Wirtschaftsinformatik Proceedings 2011*. Paper 9. Available at: <http://aisel.aisnet.org/wi2011/9>. (Accessed: 28 October 2019)
- Meola, A. (2016, 19 December). Tech Insider: What is the Internet of Things (IoT)? Available at: <http://www.businessinsider.com/what-is-the-Internet-of-things-definition-2016-8> (Accessed: 12 March 2017)
- Molesworth, M. & Suortfi, J. P. 2002. 'Buying cars online: The adoption of the web for high-involvement, high-cost purchases', *Journal of Consumer Behaviour*, 2(2): 155–68.
- Mowen, J.C. 1999. *The 3M Model of Motivation and Personality: Theory and Empirical Applications to Consumer Behavior*. Dordrecht: Kluwer Academic Publisher.
- Nabih, M. I., Bloem, J. G., & Poiesz, T. B. C. 1997. 'Conceptual issues in the study of innovation adoption behaviour', *Advances in Consumer Research*, 24: 190–196.
- Ooi, K. B. & Tan, G. WH 2016. 'Mobile technology acceptance model: An investigation using mobile users to explore smartphone credit card', *Expert Systems with Applications*, 59: 33-46.
- Paetz, A., Dütschke, E. & Fichtner, W. 2011. 'Smart homes as a means to sustainable energy consumption: A study of consumer perceptions', *Journal of Consumer Policy*, 35: 23-41. doi: 10.1007/s10603-011-9177-2.
- Pai, J. & Tu, F. 2011. 'The acceptance and use of customer relationship management (CRM) systems: An empirical study of distribution service industry in Taiwan.' *Expert Systems with Applications*, 38: 579-584.
- Pajoutan, M. & Seifried, C. 2014. 'Innovation with Information Technologies and using nostalgia as an organisational strategy', *Journal of Applied Sport Management*, 6(2): 91-108.
- Porter, M. E., & Heppelmann, J. E. 2014. 'How smart, connected appliances are transforming competition', *Harvard Business Review*, 92(11): 64–88.
- Ram, S. 1987. 'A model of innovative resistance'. In M. Wallendorf, and P. Anderson (eds), *Advances in consumer research*, 14: 208–215.
- Ram, S. & Sheth, J. N. 1989. 'Consumer resistance to innovations: The marketing problem and its solutions', *Journal of Consumer Marketing*, 6(2): 5–14. doi:10.1108/EUM0000000002542.

- Rogers, E. M. 1995. *Diffusion of innovations*, Fourth Edition. New York, NY: The Free Press.
- Roy, S. K., Balaji, M. S., Quazi, A. & Quaddus, M. 2018. 'Predictors of customer acceptance of and resistance to smart technologies in the retail sector', *Journal of Retailing and Consumer Services*, 42: 147-160.
- Schnalke, M. & Mason, R. B. 2014. 'The influence of culture on marketing communications: critical cultural factors influencing South African and German Business' *Problems and Perspective in Management*, 12(1): 172-180.
- Seifried, C. S. & Meyer, K. 2010. 'Nostalgia-related aspects of professional sport facilities: A facility audit of Major League Baseball and National Football League strategies to evoke the past', *International Journal of Sport Management Recreation and Tourism*, 5: 51-76.
- Seyed Esfahani, M. & Reynolds, N. 2021. 'Impact of consumer innovativeness on really new product adoption, *Marketing Intelligence & Planning*, 39(4): 589-612. <https://doi.org/10.1108/MIP-07-2020-0304>.
- Sicari, S., Rizzardi, A., Grieco, L. A. & Coen-Porisini, A. 2015. 'Security, privacy and trust in Internet of Things: The road ahead', *Computer Networks*, 76: 146-164. doi:10.1016/j.comnet.2014.11.008.
- Sletteameås, D. 2009. 'RFID-the "Next Step" in consumer-product relations or Orwellian nightmare? Challenges for research and policy', *Journal of Consumer Policy*, 32: 219-244. doi:10.1007/s10603-009-9103-z.
- Snelgar, R., Shelton, S. A. & Giesser, A. 2017. 'A comparison of South African and German extrinsic and intrinsic motivation', *South African Journal of Economic and Management Sciences*, 20(1): 1-12. <https://dx.doi.org/10.4102/sajems.v20i1.1552>.
- Statista Smart Home Market Outlook: Germany & South Africa, 2020. Smart Home: Germany and South Africa. Available at: <https://www.statista.com/outlook/279/137/smart-home/germany#market-revenue> and <https://www.statista.com/outlook/279/112/smart-home/south-africa> (Accessed: 14 July 2020).
- Strite, M. & Karahanna, E. 2006. 'The role of espoused national cultural values in technology acceptance', *MIS Quarterly*, 30(3): 679-704.
- Szmigin, I. & Foxall, G. 1998. 'Three forms of innovation resistance: The case of retail payment methods', *Technovation*, 18(6-7): 459-468. doi:10.1016/S0166-4972(98)00030-3.
- Taber, K. S. 2018. 'The use of Cronbach's Alpha when developing and reporting research instruments in Science Education', *Research in Science Education*, 48: 1273-1296.
- Talke, K., & Heidenreich, S. 2014. 'How to overcome pro-change bias: Incorporating passive and active innovation resistance in innovation decision models', *Journal of Product Innovation Management*, 31(5): 894-907. doi:10.1111/jpim.12130.
- Talwar, S., Talwar, M., Kaur, P. & Dhir, A. 2020. 'Consumers' resistance to digital innovations: A systematic review and framework development', *Australasian Marketing Journal*, 28: 286-299.
- Triandis, H. C. 1989. 'The Self and Social Behavior in Differing Cultural Contexts', *Psychological Review*, 96: 506-20.
- Truong, Y. 2013. 'A cross-country study of consumer innovativeness and technological service innovation', *Journal of Retailing and Consumer Services*, 20: 130-137.
- Tsourela, M. & Nerantzaki, D. 2020. 'An Internet of Things (IoT) Acceptance Model. Assessing Consumer's Behavior towards IoT Products and Applications', *Future Internet*, 12(191): 1 - 23. <https://www.mdpi.com/1999-5903/12/11/191>.
- Van Hung, T., Thao, T.N.P., Kieu, N. T. & Hien, D. Q. 2021. 'Research on factors influencing intention to use Smart home devices in Danang,' 21st ACIS International Winter Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD-Winter), 2021: 208-212, doi: 10.1109/SNPDWinter52325.2021.00052.
- Venkatesh, V., Thong, J. Y. L. & Xu, X. 2012. 'Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology', *MIS Quarterly*, 36(1): 157-178.
- Venkatraman, M. P. & Price, L. L. 1990. 'Differentiating between cognitive and sensory innovativeness: Concepts, measurement, and implications', *Journal of Business Research*, 20(4): 293-315. doi:10.1016/0148-2963(90)90008-2.

- Wiedmann, K. P., Hennigs, N., Pankalla, L., Kassubek, M. & Seegebarth, B. 2011. 'Adoption barriers and resistance to sustainable solutions in the automotive sector', *Journal of Business Research*, 64(11): 1201–6.
- Worthley, R., Macnab, B., Brislin, R., Ito, K. & Rose, E.L. 2009. 'Workforce motivation in Japan: An examination of gender differences and management perceptions', *The International Journal of Human Resource Management*, 20: 1503-1520. <https://doi.org/10.1080/09585190902983421>.
- Yangil, P., & Chen, J. V. 2007. 'Acceptance and adoption of the innovative use of smartphone', *Industrial Management and Data System*, 107(7): 1349–1365. doi:10.1108/02635570710834009.
- Yu, J., Bang, H., Lee, H. & Lee, Y. S. 2016. 'Adaptive Internet of Things and Web of Things convergence platform for Internet of reality services', *Journal of Supercomputing*, 72: 84-102.

Assessing Consumers' brand loyalty after a brand crisis: A case of Listeria in KwaZulu-Natal

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ABSTRACT

Brand crises are unexpected and any organisation can be exposed to a brand crisis. Existing research on brands in crisis focus mostly on the effectiveness of the organisation's response. However, there is limited research on the effect of a brand crisis on consumer's brand loyalty. This study aims to examine the impact of a brand crisis on a consumer's brand loyalty, with the Listeriosis crisis used as a case study. A quantitative research method was used to collect data from 384 randomly selected food retail store shoppers at Empangeni and Richards Bay in KwaZulu-Natal, through the use of questionnaires. The findings reveal that females and males differ significantly and high-income earners expressed loyalty to Rainbow and Enterprise even after the Listeriosis crisis because of their reliability, the unique products that they offer, and the fact that they satisfy their customer needs. Findings also showed that customers remain loyal even after a brand crisis. The research was limited to uMhlathuze municipality thus it cannot be generalised. The brand crisis was limited to the Listeriosis case. This study contributes to the literature on brand management by examining why consumers remain loyal to certain brands even after a crisis. This study also provides insight into how organisations can prepare for a crisis because there is no organisation immune to a brand crisis. The research concludes that because of the strong relationship that consumers have with brands, the former is less affected by crises. Moreover, the positive prior beliefs towards brands faced with a product-harm crisis, lead to less blame from consumers. Based on the findings of the study, it can be concluded that brand loyalty far outweighs temporal crises. Organisations should build strong and positive relationships with consumers through engaging in corporate social responsibility activities and should also have a crisis management team to handle product-harm crises.

Keywords: Brand loyalty, Listeriosis, product-harm crisis, crisis management

INTRODUCTION

The pertinent question is why do consumers remain loyal to brands even after a brand crisis? Brand crises are always unexpected and no organization is immune to a brand crisis. Every organization has an equal chance of going through one (Holmes, 2011). The most important point to note when it comes to brand crises is that they are all different and they affect organisations in different ways. For example, the H&M crisis, where the company was found to promote racism through a 'monkey' sweatshirt ad (West, 2018) is not the same as the Ford Kuga crisis where their cars were catching fire while on the road (Hosken & Knowler, 2017). These two crises are different, and the damages

they cause differ. The H&M crisis is a value-related crisis. A value-related crisis does not directly involve the product instead it involves the social and ethical issues surrounding the values exposed by the brand (Dutta & Pullig, 2011). The Ford crisis is a product-harm crisis, and this type of crisis occurs when products are found to be defective or dangerous. A product-harm crisis can cause major revenue and market-share losses, and it can also lead to costly product recalls. The Ford crisis and the Listeriosis crisis are both product-harm crises. Product-harm crises are problematic because they can result in serious damages such as injuries to consumers (Idas, 2018).

Product-harm crises can destroy the organisation's public image along with its reputation and they can also result in the lack of consumer's confidence in the affected brand (Idas, 2018). Product-harm crises are known for dominating the public and media space since they are seen as well-publicised incidents where products are found to be defective or dangerous to human health (Yannopoulou, Koronis & Elliott, 2011). A crisis like this can harm the brand equity of an organisation by weakening brand confidence and reducing the likelihood of brand consideration and choice (Dutta & Pullig, 2011). This crisis is similar to a competence-based crisis propagated by Votolato and Unnava (2006, cited in Li & Wei, 2016). This emanates from companies' competence in making a product. For example, using cheaper raw materials which result in product failure. The main focus of this study is the Listeriosis crisis, a product-harm crisis that South Africa was faced with between 2017 – 2018 (Van der Vyver, 2018). According to Idas (2018), *Listeria monocytogenes* is the kind of bacteria found in water, soil and in animals such as poultry as well as cattle.

Uncooked vegetables and ready-to-eat processed meat products like viennas and polonies have the highest risk of *Listeria* (Donovan, 2015). *Listeria* translates to Listeriosis disease when contaminated foods or water is consumed (Donovan, 2015; Carpentier & Cerf, 2011; Idas, 2018). A *Listeria* bacterium was found at two Enterprise processed meat factories and at one Rainbow Chicken polony factory. This was presented on the 3rd of March 2018 by the National Institute for Communicable Disease (NICD), along with the other partners they were working with. The Listeriosis crisis resulted in consumers falling ill, and it destroyed the public image along with the reputation of the organisation (Idas, 2018). Moreover, the Listeriosis crisis resulted in market-share losses and it also led to costly product recalls which Rainbow and Enterprise had to embark on. A crisis like this, has a negative impact with regards to marketing the brand. Branding is an aspect of marketing, and marketing is all about creating customer value and satisfaction (Kotler et al., 2015). This is supported by Drummond and Ensor (2005) who posit that the most crucial aspect of marketing is that the needs of the consumers must be met and understood mainly because this is where the success stems from.

Consumers play an important role when it comes to brands because the strength of every brand is highly influenced by the perceptions that the consumers have about that particular brand (Sago, 2014). The perceptions of consumers about brands are based on the experiences they have had with the product or service (Sago, 2014). Through social media, consumers have a major influence on marketing content (Heinonen, 2011). Moreover, Heinonen (2011) states that consumers consume content, share knowledge with other consumers and participate in discussions. Negative information about a brand can cause changes in consumer's attitude and emotions and that can damage brand equity (Joel & Baeck, 2016). Branding is an aspect of marketing that entails creating a bond between a consumer and the brand, meanwhile, brand trust is considered as the main ingredient for this bond (Yannopoulou et al., 2011). A brand crisis, therefore, poses a threat to brand trust, brand loyalty and brand image (Park & Lee, 2013).

Eventually, consumer behaviour is also influenced by a brand crisis (Yannopoulou et al., 2013). Thus, the objective of this study is to understand why consumers remain loyal to brands even after a crisis. The next section of this study will present the review of the literature as well as spell out the theory upon which the research question is anchored. Following this, the study will then present the research methods that were used to collect the data as well as the methods of data analysis. This section will then be followed by a discussion of the data, and we will then present the results drawn from the findings.

Research objectives

- To investigate the impact of the listeriosis crisis on brand loyalty.
- To investigate whether or not consumers continued to purchase from the affected brands after the Listeriosis crisis occurred.

CONCEPTUAL THEORETICAL FRAMEWORK

Attribution theory

The attribution theory states that individuals are motivated to search for the causes of unexpected and negative events, and these attributions of responsibility can involve negative emotions and reactions (Bundy et al, 2016). Through the use of the attribution theory, Coombs & Holladay (2005) found that sympathy and anger are salient emotions in crisis management. These two emotions have a direct link to perceptions of responsibility after a product-harm crisis. Previous studies have confirmed the importance of attribution theory in crises. One of those studies includes the study conducted by Gistri et al, (2018) which adopted the attribution theory to investigate the interaction effect between brand identification and personal crisis relevance on consumers emotional reactions to a fashion brand crisis. Xie & Keh (2016) also adopted the attribution theory and reveal that brand reputation impacts the effects of promotion programs on consumer response to a product-harm crisis. Moreover, Whelan & Dawar (2016), found that the attachment style of consumers which can either be fearful or secure affects the attributions of blame in cases of a product-harm crisis.

Emotions play an important role in the attribution theory (Gistri et al, 2018). They affect the consumer's intention to act. For example, angry consumers can act against the company responsible for a crisis by decreasing their intention to buy its products, increasing negative word-of-mouth, and developing a more negative attitude towards the company (Coombs & Holladay, 2005). Consumers that share a strong positive relationship with brands affected by a crisis defend the brand and they continue to purchase from those brands even after a crisis.

Brands

The most valuable asset that an organisation possesses is its brand. Organisations must manage the value of those brands, and make it the entity's top priority. Brands are known to be the carriers of information because they provide consumers with information concerning the quality and origin of the brands (Mishra, 2011). Brands also make it possible for consumers to be able to identify and recognise products that belong to particular brands (Mishra, 2011). This then makes brands very sensitive when it comes to the perceptions of the public which now more than ever makes them very important to their holders (Salvador & Ikeda, 2017).

Pike (2017), posits that the observations of manifestations by consumers assist consumers in understanding brands better. The past experiences that consumers have with particular brands serve as a reminder of those brands, and these past experiences influence the consumer's decision to purchase in future (Reddy, 2017). The past experiences that consumers have with brands can either be positive or negative. The positive experiences ensure that consumers purchase from the same brand in future (Reddy, 2017). A brand can also be defined as something that is known to have a unique design, symbol, word or sign that organisations use to differentiate their products or services from other products or services (Pike, 2017).

Brand loyalty

When the needs of consumers are satisfied in a manner that best reaches their desires to the fullest potential, this results in brand loyalty (Toklu & Kucuk, 2017). Besides, Hongwei, Yan & Lloyd (2012) explain brand loyalty, by indicating that when a consumer makes purchases of the same brand for some time due to the satisfaction of their desired needs, the reward that the consumer gives to that organisation results in the continued support for a long period. The findings from a UK study conducted by Veloutsou (2015), which had a sample size of 189 respondents, shows that the strength of the consumer-brand relationship is a very strong predictor of brand loyalty.

Exposure to negative information about a brand can have a negative influence on brand loyalty, corporate credibility and corporate asset values (Park & Lee, 2013). When consumers are loyal to a brand, it means that they become attached to the brand; a crisis can have a negative influence on brand attachment. This is supported by a study that was conducted by Park & Lee (2013) in Korea where 480 questionnaires were collected from people who purchased from grocery brands that were once faced with a crisis. One of those crises happened in 2008 when rat heads were found inside Shrimp snacks. The other one was the melamine crisis where industrial plastics chemical was added during milk processing which resulted in 296,000 children falling ill after consumption of such milk. The findings from

this study reveal that when a crisis occurs, consumers who are emotionally attached to a brand feel more betrayed and disappointed compared to the consumers that are not attached to a brand (Park & Lee, 2013).

Moreover, the findings from a study conducted in Australia by Matzler et al, (2006) which aimed at investigating the moderating effects of some consumer characteristics on the value-brand trust-brand loyalty chain, reveal that consumers' brand loyalty is important for companies to obtain a sustainable competitive advantage. This is because it gives companies some protection from competitors. The study of Matzler et al., (2006) further reveal that the impact of brand trust on purchase loyalty is significantly stronger for women. It was also found that, for women, other trust-building factors such as product knowledge or interaction with the salesperson are more relevant when it comes to brand loyalty (Matzler et al, 2006).

Besides, the study undertaken by Matzler et al, (2006) also demonstrated that brand loyalty is strongly influenced by consumer involvement, price consciousness and brand consciousness. During a product-harm crisis, competitors interfere and they make it a point to weaken the affected products by increasing their advertising while some competitors even reduce their prices, this can have a negative influence on brand loyalty (Siomkos et al, 2010). Attribution theory states that people attempt to understand the behaviour of others by attributing feelings, beliefs, and intentions to them. Consumers may be angered or feel sympathy when a product does not perform its function. The attachment style of consumers (whether fearful or secure) affects the attributions of blame in cases of a product-harm crisis Gistri, Corciolani & Pace (2018). Thus, customers who remain loyal to a brand do so because they sympathise with the brand and are comfortable with the company's previous performance.

According to Yannopoulou et al., (2011), trust increases brand loyalty and leads to commitment in a business-to-business situation. Further, Yannopoulou et al, (2011) indicate that trust becomes operational only when the trusting parties are vulnerable; and for this to happen the parties are to be involved in risk-taking behaviour for the vulnerability to exist. Consumers' trust is put to the test when an organisation is faced with a crisis. Research in interpersonal relationships reveal that simple denials after a brand's crisis are less effective when it comes to restoring consumers trust in the brand (Dutta & Pullig, 2011). Moreover, the research also reveal that an apology and explanation has a positive impact on restoring trust regardless of whether it is weak or strong (Dutta & Pullig, 2011).

The effect of corporate social responsibility to brand loyalty

Corporate Social Responsibility (CSR) was first defined by Carroll in 1979 (Lacap., Cham & Lim 2021). Carroll (1979) proposed four responsibilities that businesses should fulfill – economic, legal, ethical, and philanthropic (Lacap et al, 2021). Economic responsibility refers to the idea that a company needs to achieve its shareholders' profitability, Legal responsibility is the fulfillment of legal requirements for a company's financial activities (Carroll, 1979; Khan and Fatma, 2019). Ethical responsibility means that a firm must behave appropriately and function based on society's expectations and philanthropic responsibility is the obligation of a firm to participate in society's welfare (Carroll, 1979; Khan and Fatma, 2019). CSR is regarded as a good strategic marketing tool and it has a significant impact on consumer behaviour (He & Lai, 2014). Recent studies have highlighted the importance of CSR to enhance a long-term competitive advantage for the organisation (He & Lai, 2014; Lacap et al, 2021; Akbari, Nazarian, Foroudi, Seyyed Amiri, & Ezatabadipoor, 2021). Moreover, previous literature reveal that CSR has been regarded as an important publicity tool that directly impacts brand loyalty (Werther and Chandler, 2005). In marketing, brand loyalty has been considered as one of the significant desired outcomes for many of the firms due to its positive impacts on organisations. A study conducted by (Lacap et al., 2021), which aimed to investigate the relationship between CSR and brand loyalty show that CSR positively and significantly influences brand loyalty.

Brand equity theory

The research is also based on the brand equity theory (Keller, 1993) which indicates that consumers derive functional and symbolic benefits from a brand. Brand crises can thus emanate from performance-related crises/ product-harm crises and values-related crises. This research is based on a product-harm crisis that emanates from products that are defective or dangerous thus reducing the ability of a brand to provide functional benefits (Li & Wei 2016). Brand equity is something that is known to reside within consumers instead or residing within a brand (Raggio

& Leone, 2007). On the other hand, Sago (2014) defines brand equity as a bond that is found to exist between the brand and its customers, and is highly influenced by the level of loyalty that consumers have towards the brand. This is supported by the findings from the research undertaken in Syria by Alhaddad (2014) which had a sample size of 204 students which reveal that brand loyalty has a positive effect on brand equity. Brand equity is too fragile because it is founded on consumer's beliefs and is outside the control of management (Gao et al, 2011). Therefore, negative information about a brand can have an adverse influence on an organisations brand equity (Yannopoulou et. al, 2011). Previous studies show that a brand crisis can harm organisations brand equity by weakening consumers' brand confidence, reducing the likelihood of brand consideration and choice, which ends up harming the growth, profit and survival of an organisation (Yannopoulou et. al, 2011; Park & Lee, 2013; Dutta & Pullig 2011).

Brands in crisis

The kind of situation where a consumer starts making negative judgements about a particular brand while becoming suspicious at the same time is known as a brand crisis (Haiying & Gouliang, 2013). Brand crises have an impact on organisations. Furthermore, Yannopoulou, et al., (2011) indicate that crises in organisations are defined as unexpected and unfortunate events waiting to happen. Moreover, Salvador et al., (2015) indicate that a brand crisis does not only affect organisations financially; it also affects the stakeholders of the organisations emotionally and physically. It has become extremely difficult to deal with a brand crisis due to the easy circulation of information that consumers share. Brands have become sensitive to the perceptions and opinions of consumers since they possess the power to potentially destroy them (Salvador & Ikeda, 2017).

The things that might initiate a brand crisis include design errors, defective products, product recalls, and manufacturing faults along with marketing mistakes (Yannopoulou et al., 2011). All of this, results in consumers being exposed to negative information about brands (Joel & Baeck, 2016). Negative information about a brand can damage brand equity by changing the consumer's attitude and emotions (Joel & Baeck, 2016). The findings from previous studies reveal that negative information about a brand can result in negative corporate associations (Idas 2018; Einwiller et al., 2006; Joel & Baeck, 2016). However, there are different types of brand crises and they all impact organisations differently.

The Listeriosis crisis in South Africa

Listeria monocytogenes is the kind of bacteria found in water, soil and in animals such as poultry as well as cattle (Idas, 2018). Uncooked vegetables and ready-to-eat processed meat products like viennas and polonies have the highest risk of *Listeria* (Donovan, 2015). *Listeria* translates to Listeriosis disease when contaminated foods or water is consumed (Donovan, 2015; Carpentier & Cerf, 2011; Idas, 2018). In the United States, Listeriosis disease is regarded as the third leading cause of death by food poisoning (Schweon, 2015). In Europe, the Listeriosis disease is rated as the second leading cause of death by food poisoning while Salmonellosis is the leading cause of death by food poisoning (Idas, 2018).

In South Africa, an outbreak of Listeriosis, a serious foodborne disease has been ongoing since the start of 2017, between 1 January 2017 through 14 March 2018 (Idas, 2018). From 1st January 2017 to 14th March 2018, it was confirmed that there were 978 lab-confirmed cases of *Listeria* reported to the National Institute for Communicable Diseases (NICD) and the number included all of the provinces in South Africa (Idas, 2018). According to Idas (2018), the statistics show that the majority of the cases were from 3 provinces, namely: Gauteng with 581 people (59%) while Western Cape came second with 118 people (12%), 70 (7%) people came from KwaZulu-Natal and lastly, the remaining 978 cases came from the other provinces in South Africa. According to Van der Vyver (2018), when the Listeriosis outbreak ended on 4th July 2018, there were 1 056 cases of ill people recorded and 214 people died. According to the media statement issued by the Minister of Health on 3rd September 2018, the Listeriosis disease was triggered by *Listeria*. A *Listeria* bacterium was found at two Enterprise processing meat factories and one Rainbow Chicken polony factory.

A brand crisis has an impact on brand loyalty (Ruan, 2016). Brand loyalty has been endorsed by literature and marketing experts as an intangible asset for an organisation. According to Ruan (2016), the most crucial questions

to be addressed after a crisis are: what kind of role does brand loyalty play during a crisis? Does strong brand loyalty help or harm a company going through a crisis? Ruan (2016), posits that professionals believe strong brand loyalty can empower a company to overcome the crisis. However, the author also argues that in some cases, strong brand loyalty does not shield a company from a crisis, instead it can become a liability because high expectations of loyal customers were not met.

Outbreaks of listeriosis have caused fatalities, massive well-publicized recalls, costing the food industry heavy financial losses and a damaged reputation (Walpuck, 2018). The aforementioned outbreak is an example of a brand crisis in the form of a product recall. Product recalls in the food industry are faced with different reactions. Research on the impact of Listeriosis on brand loyalty indicate that food safety reputation (in terms of confidence and consumers' expectation) is strongly correlated with food category and its mainly related to ingredients and presence of a certification (Cane, 2018). Research conducted on food product recall show that loyal customers tend to stay with affected products while delaying repurchases of these products (Byun et al., 2020). Consumers are more forgiving, tolerant and less scared when recalls are for heavily processed products rather than on organic or healthy products as such products are regarded as high risk (Cane, 2018). Another school of thought posit that product recall can improve a company's image if the company adopts a socially responsible attitude and is consistent and coherent in its communication, and transparent in its relationships with media and consumers (Cane, 2018). Strong brand loyalty does not shield the company, however, it can become a liability to the company as customers have high expectations (Roan, 2016). On the other hand, the strength of brand loyalty a company possesses determines the potential of overcoming a brand crisis.

Product harm crisis can ruin brand equity, tarnish product reputation, affect brand confidence, brand trust and brand loyalty (Cane, 2018; Haslam, n.d). Moreover, Cane (2018) posited that product recalls not only harm brand confidence but the public's general perception of the food industry as a whole, where food products are involved. The reaction or response of a company during a brand crisis plays a role in increasing or decreasing brand loyalty (Smith et al., 2016; Cane, 2018). Companies that react promptly, positively and efficiently during a brand crisis can maintain brand loyalty or may suffer less brand damage even after a serious brand crisis (Haslam n.d; Smith, et al. 2019). Alternatively, companies that react negatively may experience brand erosion as experienced by Tiger brands who were considered to be defensive in their reaction, thus leading to their reputation being tarnished. Tiger Brands remained in denial for a long period before they accepted accountability, this caused an uproar on Twitter (van der Vyver, 2018). There is therefore the need for more research on how brand crises have an impact on brand loyalty.

RESEARCH METHODOLOGY

The study employed a quantitative research approach through the use of survey questionnaires from customers of food retail stores in the uMhlathuze region. The data was collected from 384 respondents who are shoppers at Empangeni centre and the Richards Bay malls respectively; with the main focus being on three food retail stores which are: Shoprite, Pick 'n Pay and Checkers. The reason for using questionnaires was due to the nature of the study which required data to be collected from the malls. The questions in the questionnaire were closed-ended because it was quicker and easier for consumers to complete the questionnaires since malls are very busy and as a result, people do not have much time to spend on something that they think will not benefit them.

According to Statistics South Africa census 2019/2020 figures, the population for the uMhlathuze region is 384 449 (Stats S.A, 2020). The population for this study was based on the shoppers that frequently visit Shoprite, Checkers and Pick 'n Pay at Empangeni (Sanlam Centre) and Richards Bay (Boardwalk) respectively. According to the Richards Bay Boardwalk management, an estimated 1.2 million customers frequent Boardwalk on a rotational monthly basis and according to the Sanlam Centre management, 700 000 customers frequent Sanlam Centre rotationally every month.

This study employed a convenience sampling approach where the sample size is chosen based on the convenience of the researcher (Acharya, Prakash, Saxena & Nigam, 2013). This was done because the nature of the study required participants from the malls and it was not realistic that every member that visited these malls was going to have a known chance of being selected. The sampling unit for this study is the food retail store shoppers at Empangeni (Sanlam Centre) and Richards Bay (Boardwalk mall). The respondents were 18 years of age and above.

With reference to Uma Sekaran's sampling table, if the population size is more than 75 000, the sample size should be 384 (Sekaran, 2003). According to the store managers at Empangeni, the population of customers that frequent Shoprite, Pick 'n Pay and Checkers is 138 000, 27 129 and 106 454 respectively. At Richards Bay, Shoprite has 82 660 while Pick 'n Pay has 36 400 and lastly Checkers has 15 208 customers that frequent their stores every month. Consequently, the sample size for this study was 384, as the population size was greater than 75 000.

Data analysis and interpretation

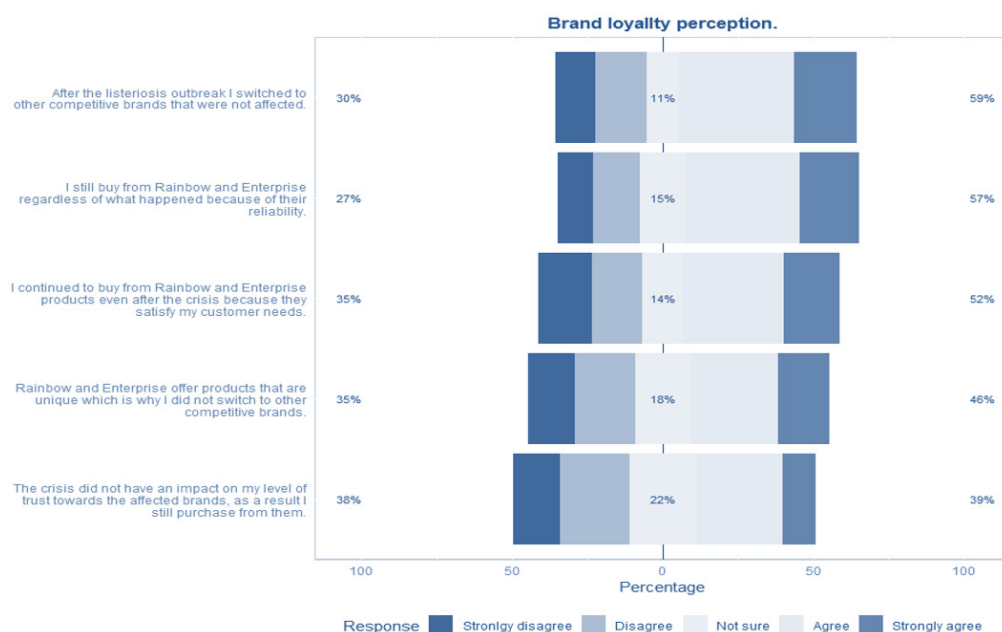
The researcher used the Statistical Package for Social Science (SPSS) version 24 to analyse data. The researcher made use of descriptive and some inferential stats. According to Maree (2016), statistical inference is when the findings from the sample data are used to generalise or draw conclusions about a particular population. The researcher coded the data on SPSS and the analyses were presented using bar graphs, pie charts, percentages and cross-tabulations. The researcher also used statistical mean, mode and median in the data analysis. The minimum and maximum values were also outlined. Moreover, the researcher also employed Correlation analysis to determine the significant correlation and the significant difference between the variables.

FINDINGS

Objective 1: To investigate the impact of the Listeriosis crisis on brand loyalty.

This objective was addressed through a Five-point Likert type scale of 1 – 5 where 1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = strongly agree

FIGURE 1
THE IMPACT OF THE LISTERIOSIS CRISIS ON BRAND LOYALTY



Five statements were used to address the research objective in terms of brand loyalty, as illustrated in Figure 1 above. Based on Figure 1, it can be observed that 198 consumers (52%) indicate that they continued to buy from Rainbow and Enterprise after the Listeriosis crisis because they felt these brands satisfy their needs, while 133 consumers (35%) disagreed with the statement. The findings also reveal that 152 consumers (39%) felt that the crisis did not have an impact on their level of trust towards the affected brands, and as a result, they still purchase from them. However, 147 consumers (38%) disagreed and strongly disagreed with the statement. These findings suggest that consumers are still loyal to the affected brands hence some indicated they still purchase from them because of their reliability, albeit that the majority is not in overwhelming agreement. It may also suggest that customers' loyalty towards the brand was not affected because the product in itself may be regarded as heavily processed thus, customers in a way expected the product to be high risk (Cane, 2018).

TABLE 1
IMPACT OF THE LISTERIOSIS CRISIS ON BRAND LOYALTY

Items	Label	Low (%)	Medium (%)	High (%)	Mean	Standard deviation
Item 1	After the listeriosis outbreak, I switched to other competitive brands that were not affected.	30	11	59	3.34	1.339
Item 2	I still buy from Rainbow and Enterprise regardless of what happened because of their reliability.	27	15	57	3.38	1.283
Item 3	I continued to buy from Rainbow and Enterprise products even after the crisis because they satisfy my customer needs.	35	14	52	3.18	1.387
Item 4	Rainbow and Enterprise offer products that are unique which is why I did not switch to other competitive brands.	35	19	46	3.12	1.338
Item 5	The crisis did not have an impact on my level of trust towards the affected brands, as a result, I still purchase from them.	38	22	39	2.97	1.252

According to the grading in Table 1, if consumers obtained a mean score of 2.5 and less, it indicates that consumers were between disagree and strongly disagree concerning the items measuring the impact of the Listeriosis crisis on brand loyalty. Meanwhile, 2.6 to 3.5 indicate that they were neutral, while 3.6 and more, indicate customers were between agree and strongly agree to the items measuring the impact of the Listeriosis crisis on brand loyalty. According to Table I above, it can be observed that all of the mean scores are between 2.6 and 3.5 (item 1; 3.34, item 2; 3.38, item 3; 3.18, item 4; 3.12 and item 5 2.97). These findings suggest that the consumers were indifferent to all of the 5 items used to determine the impact of the Listeriosis crisis on brand loyalty. These findings suggest that consumers were affected by the crisis. However, they are still loyal to the affected brands. Although the respondents would have been expected to have negative sentiments to the brand crisis, the mean scores of the items above suggest that consumers were indifferent. This may be a sign of existing and prior loyalty to the brand.

Research objective 2: To investigate if consumers continued to purchase from the affected brands after the Listeriosis crisis occurred.

A large portion of consumers (75%) indicate that they still purchase from Rainbow and Enterprise. Meanwhile, 25% of the consumers indicate they no longer purchase from Rainbow and Enterprise. These findings support the above assumptions regarding loyalty to these brands after the crisis. They reveal that consumers still purchase from the affected brands even after they knew what transpired. This could be a result of the company's positive reaction during a brand crisis.

The tables below present the correlation of the impact of the listeriosis crisis on brand loyalty against gender, level of income and the level of education.

TABLE 2
CORRELATION OF THE IMPACT OF THE LISTERIOSIS CRISIS ON BRAND LOYALTY AGAINST GENDER

	Male		Female		Sig. (F)	Correlation	
	Mean	Std. deviation	Mean	Std. deviation		Rho	Sig.
Brand loyalty	2.06	0.849	2.25	0.782	0.019**	0.115	0.024**

Based on Table 2, it can be observed that there was a positive ($\rho = 0.115$) significant correlation of (0.024) between gender and brand loyalty. Moreover, it can also be observed that there was a significant difference ($p=0.019$) between gender and brand loyalty. These findings suggest that there is a difference in brand loyalty between males and females.

TABLE 3
CORRELATION OF THE IMPACT OF THE LISTERIOSIS CRISIS ON BRAND LOYALTY AGAINST THE LEVEL OF INCOME

Impact of the crisis	Level of income	Mean	Median	Mode	S.D	Sig. (F)	Correlation	
							rho	Sig.
Brand Loyalty	R0 - R7200	2.10	2.00	3.00	0.807	0.001***	0.150	0.003***
	R7201 - R16500	2.13	2.00	3.00	0.871			
	R16501 - R33400	2.47	3.00	3.00	0.758			
	R33401 - R57400	2.50	2.50	2.00	0.535			
	R57400 and above	3.00	3.00	3.00	0.000			

The findings reveal that there was a positive ($\rho = 0.150$) significant correlation of (0.003) between the level of income and brand loyalty. Moreover, it can be observed that there was a significant difference ($p=0.001$) between the level of income and brand loyalty. From these findings, it can be observed that the correlation is positive and this suggests that as income increases, brand loyalty also increases. Correlation of the impact of the listeriosis crisis on brand loyalty against the level of education is displayed below in Table IV.

TABLE 4
CORRELATION OF IMPACT OF THE LISTERIOSIS CRISIS ON BRAND LOYALTY AGAINST THE LEVEL OF EDUCATION

Impact of the Listeriosis crisis	Level of education	Mean	Median	Mode	S.D	Sig. (F)	Correlation	
							rho	Sig.
Brand Loyalty	Primary school	1.67	2.00	2.00	0.500	0.035**	-0.024	0.635
	High school	2.15	2.00	3.00	0.802			
	Diploma	2.39	3.00	3.00	0.791			
	Bachelor degree	2.13	2.00	3.00	0.808			
	Postgraduate	2.09	2.00	3.00	0.883			

The findings reveal that there was no significant correlation between the level of education and brand loyalty. However, it can be observed that there was a significant difference ($p=0.035$) between the level of education and brand loyalty. This means that although brand loyalty does not increase as education increases, there was a significant difference between the different levels of education and brand loyalty.

DISCUSSIONS

Brand loyalty

The findings from this study reveal that consumers were affected by the crisis because some consumers stopped purchasing from the affected brands after the crisis, however, majority of the consumers are still somewhat loyal to the affected brands. Consumers highlight that they still purchase from the affected brands (Rainbow and Enterprise) after the Listeriosis crisis because of their reliability (221 consumers), the unique products that they offer and the fact that they satisfy their customer needs (see Figure I). This may display loyal customers' willingness to forgive or tolerate a strong brand because of the type of products it produces, a heavily processed brand (Cane, 2018). The findings from this present study also reveal that although consumers were affected by the Listeriosis crisis, they are still loyal to the affected brands hence they continued purchasing from them. This supports the argument that loyal customers tend to stay with affected products while delaying repurchases of these products (Byun. et al. 2020).

These findings also suggest that the respondents had a strong relationship with the affected brands. Moreover, confirming the findings of this current study, the findings from a UK study conducted by Veloutsou (2015) reveal that the strength of the consumer-brand relationship is a very strong predictor of brand loyalty. It was observed that the

strong connection or relationship that consumers had with the affected brands resulted in brand loyalty. Rainbow and Enterprise were able to build brand loyalty through satisfying the needs of the consumers and being reliable, paying attention to customer care and staying honest with the consumers (Wiese, 2014). Perhaps, the main reason why consumers are loyal to Rainbow is that the organisation is a relationship-based enterprise hence they make a serious effort towards ensuring that they participate in corporate social responsibility and they do that through social investment programmes which include education and health (KZN-top-businesses, 2012). This may have been the reason why consumers were marginally positive in their reactions to these companies.

The loyalty of these consumers towards these brands can be explained by the fact that Rainbow developed a Corporate Social Responsibility(CSR) by supporting secondary school children from disadvantaged schools, funding them in improving Mathematics, Science and English along with providing their families with nutrition in the form of chicken (KZN-top-businesses, 2012). Moreover, Tiger Brands (Enterprise) supports transformation by advancing Broad-Based Black Economic Empowerment (BBBEE) along with the other initiatives. This confirms Cane's, (2018) argument that product recall can improve a company's image if the company adopts a socially responsible attitude and is consistent and coherent in its communication and transparent in its relationships with media and consumers.

In this present study, it was also found that there was a positive significant correlation between gender and brand loyalty (see Table II). Moreover, the findings also revealed that there was a significant difference between gender and brand loyalty (see table II). These findings suggest that there is a difference in brand loyalty between males and females. This is following the findings from a study undertaken by Matzler, Grabner-Krauter & Bidmon (2006) in Australia which aimed to investigate the moderating effect of some consumer characteristics on the value-brand, trust-brand loyalty chain, and revealed that the impact of brand trust on purchase loyalty is significantly stronger for women than men. The findings also reveal that for women other trust-building factors such as product knowledge or interaction with the salesperson are more relevant to create brand loyalty (Matzler et al, 2006). Although the statistical test does not support this, this could be the same for this study.

CONCLUSION

The study aimed to examine why consumers remain loyal to brands even after a crisis, the main focus was on the Listeriosis crisis. The information was gathered from the literature that the consumers' response to a brand crisis is determined by the relationship they share with the brand along with the prior expectations they had about the brands. The literature shows that the stronger the relationships that consumers have with a brands the less affected they are by a brand crises. Moreover, the literature also indicates that positive prior beliefs towards brands faced with a product-harm crisis lead to less blame from consumers towards the brand.

The researcher concludes that organisations should always build a positive and strong relationship with their consumers and media and that can be done through engaging in corporate social responsibility activities. This is because crises are unexpected events that any organisation can be faced with; therefore, a positive relationship with the consumers can serve as a shield that deflects the potential reputational damage from a crisis. The literature also reveals that crises are always unexpected and there is no organisation immune to a crisis. Therefore, the researcher recommends that every organisation should have a crisis management team in place, in that way the damages caused by a crisis will be minimized because the organisation will be prepared for the crisis.

MANAGERIAL RECOMMENDATIONS

From the findings contained in this study, it is suggested that although consumers stopped buying these brands immediately after the crisis, they continued to buy the products of these companies when it was all over, suggesting that this exhibited some sort of loyalty to the company. The literature suggests that building loyalty could be a significant contributor to insulating companies from permanent harm during a crisis. Therefore, organisations must emphasize loyalty-building programmes and invest in these so that when a crisis hits, it will only be a temporary short term setback. Also, how this crisis was handled will build more loyalty going forward. That is, when consumers perceive the organisation to have handled the crisis well then the more trust and confidence they will place on the

brand, all of these things combined lead to greater brand loyalty. Protocols need to be put in place to ensure that there is a blueprint for action should such a crisis besiege any organisation or entity in the future.

Organisations should build strong and positive relationships with consumers through engaging in corporate social responsibility activities, in that way consumers will even go to the extent of defending the brand during a crisis.

When responding to brand crises, organisations should at all-time present themselves as apologetic instead of being defensive, because consumers' response to a crisis is highly influenced by how the affected brands respond to a crisis. Additionally the company should be prompt, positive and efficient when responding to a brand crisis. Failure to do so may tarnish their image and reputation.

Considering the increase in crises, especially product-harm crisis, every organisation must have a crisis management team in place to act swiftly in the event of a potential brand crisis which may threaten the image and reputation of the organisation.

FURTHER RESEARCH

Data from this study was sourced from a single province in South Africa (KwaZulu Natal which only had 70 cases of Listeriosis resulting in 7% of the cases), the Listeriosis crisis affected all of the provinces in South Africa. Consequently, biases may be introduced as a result of this approach. Therefore, an opportunity exists to extend the research approach to other affected provinces in South Africa like the Western Cape which had 581 cases of Listeriosis resulting in 59% which is far more than KZN. A multiple regression analysis could be used to indicate which factors have the greatest influence on consumer brand loyalty during a brand crisis.

REFERENCES

- Akbari, M., Nazarian, A., Foroudi, P., Seyyed Amiri, N. & Ezatabadipoor, E. (2021). "How corporate social responsibility contributes to strengthening brand loyalty, hotel positioning and intention to revisit?" *Current Issues in Tourism*, 24(13), pp.1897-1917.
- Acharya, A.S. Prakash, A. Saxena, P. & Nigam, A. (2013). "Sampling: Why and how of it", *Indian Journal of Medical Specialties*, Vol. 4 No. 2, pp.330-333.
- Ahluwalia, R., Burnkrant, R.E. & Unnava, H.R. (2000). "Consumer response to negative publicity: The moderating role of commitment", *Journal of Marketing Research*, Vol. 37 No. 2, pp.203-214.
- Ahluwalia, R., Unnava, H.R. & Burnkrant, R.E. (2001). "The moderating role of commitment on the spillover effect of marketing communications", *Journal of Marketing Research*. Vol. 38, pp.458-460.
- Alhaddad, A. (2014). "The effect of brand image and brand loyalty on brand equity", *International Journal of Business and Management Invention*, Vol. 3 No. 5, pp.28-32.
- Bundy, J., Pfarrer, M.D., Short, C.E., & Coombs, W.T. (2016). "Crises and crisis management: Integration, interpretation, and research development". *Journal of Management*, Vol. 43.
- Byun, K., Duhan D.F., & Dass, M. (2020). "The Preservation Of Loyalty Halo Effects: An Investigation Of The Post-Product-Recall Behavior Of Loyal Customers". *Journal Of Business Research*. Vol. 11 No. 6, pp. 163-175.
- Cane, P. (2018). "Do Food Recalls Have A Greater Effect On Consumers' Trust When They Involve Healthy, Organic And Protected Designation Of Origin Foods And, If Yes, Why?" *Journal of Agronomy, Technology and Engineering Management*. Vol. 1 No.1, pp. 99-109.
- Carroll, A.B. (1979). "A three-dimensional conceptual model of corporate performance", *Academy of Management Review*, 4(4), pp. 497-505.
- Carpentier, B., & Cerf, O. (2011). "Review – Persistence of Listeriosis monocytogenes of food industry equipment and premises", *International Journal of Food Microbiology*, Vol. 145 No. 1, p.1.

- Cleeren, K., Dekimpe, M.G., & van Heerde, H.J., (2017), "Marketing research on product-harm crises: a review, managerial implications, and an agenda for future research", *Journal of the Academy of Marketing Science*, Vol. 45 No. 5, pp.593-615.
- Coombs, W.T., & Holladay, S.J. (2005). "An exploratory study of stakeholder emotions; affect and crises. In N. M. Ashkanasy, W. J. Zerbe, C. E. J. Härtel (Eds.)", *Research on emotion in organizations: Vol. 1: The effect of affect in organizational settings* (pp. 263–280). Bingley: Emerald Group Publishing Limited.
- Dawar, N., & Pillutla, M. M., (2000). "Impact of product-harm crises on brand equity: The moderating role of consumer expectations", *Journal of Marketing Research*, Vol. 37 No. 2, pp.215-226.
- Donovan, S. (2015). "Listeriosis a rare but deadly disease", *Clinical Microbiology Newsletter*, Vol. 37 No. 17 , pp.135-140.
- Drummond, G., & Ensor, J. (2005). *Introduction to Marketing Concepts*. Elsevier Butterworth-Heinemann, Oxford.
- Dutta, S., & Pullig, C. (2011)." Effectiveness of corporate responses to brand crises: The role of crisis type and response strategies", *Journal of Business Research*, Vol. 64 No.12, pp.1281-1287.
- Einwiller, S.A., Fedorikhin, A., Johnson, A.R., & Kamins, M.A. (2006). "Enough is enough! When identification no longer prevents negative corporate associations", *Journal of the Academy of Marketing Science*, Vol. 34 No. 2, p.185.
- Erden, T., & Swait, J. (2004). "Brand credibility, brand consideration and choice", *Journal of Consumer Research*. Vol. 31 No. 191.
- Gao, H., Knight, J.G., Zhang, H., & Mather, D., (2013). "Guilt by association: Heuristic risks for foreign brands during a product-harm crisis in China", *Journal of Business Research*, Vol. 66 No. 8, pp.1044-1051.
- Gistri, G., Corciolani, M., & Pace, S. (2018). "The interaction effect between brand identification and personal crisis relevance on consumers' emotional reactions to a fashion brand crisis", *Journal of Global Fashion Marketing*, Vol. 9 No. 3.
- Haiying, W., & Guoliang, Y. (2013). "A Brand Crisis Prevention Model Guided by the Interaction Orientation" International Joint Conference on Service Sciences, pp.57-62.
- He, Y. & Lai, K.K. (2014). The effect of corporate social responsibility on brand loyalty: the mediating role of brand image. *Total Quality Management & Business Excellence*, 25(3-4), pp.249-263.
- Heinonen, K. (2011). "Consumer activity in social media: Managerial approaches to consumers' social media behaviour", *Journal of Consumer Behaviour*, Vol. 10 No. 6, pp.356-364.
- Holmes Report, (2011). Top 10 crises of 2010, available at: <http://www.holmesreport.com/long-reads/article/top-10-crises-of-2010> (accessed 16 February 2019).
- Hosken, G., & Knowler, W. (2017). Exposed: How Ford was warned about burning Kugas but did nothing. Makole Group, available at: <http://www.businesslive.co.za> (accessed 9 October 2018).
- <https://theconversation.com/three-major-mistakes-tiger-brands-made-in-response-to-the-listeriosis-crisis-93210> (accessed 16 October 2020).
- Idas, W., (2018). *The Impact of a Product Harm Crisis on Consumer Behaviour: An Empirical Study following a Listeriosis Outbreak* (Doctoral dissertation, University of Cape Town).
- Jeon, J.O. & Baeck, S. (2016). "What drives consumer's responses to brand crisis? The moderating roles of brand associations and brand-customer relationship strength", *Journal of Product & Brand Management*, Vol. 25 No. 6, pp.550-567.
- Juntunen, M., Juntunen, J., & Juga, J., (2009). "Corporate brand equity and loyalty in B2B markets: A study among logistics service purchasers", *Journal of Brand Management*, Vol. 18 No. 4-5, pp. 300–311.
- Keller, K.L. (1993). "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity", *Journal of Marketing*, Vol. 57, pp.1-22.
- Kotler, P., Burton, S., Deans, K., Brown, L., & Armstrong, G., (2015). *Marketing*. Pearson Higher Education AU.
- Lacap, J.P.G., Cham, T.H., and Lim, X.J. (2021). "The Influence of Corporate Social Responsibility on Brand Loyalty and The Mediating Effects of Brand Satisfaction and Perceived Quality". *International Journal of Economics & Management*, 15(1).

- Lee, E., 2013. Impacts of social media on consumer behavior: decision making process. Li, M., & Wei, H. (2016). "How to Save Brand after Crises? A Literature Review on Brand Crisis Management", *American Journal of Industrial and Business Management*, Vol. 6 No. 2.
- Lisjak, M., Lee, A.Y., & Gardner, W.L. (2012). "When a threat to the brand is a threat to the self the importance of brand identification and implicit self-esteem in predicting defensiveness", *Personality and Social Psychology Bulletin*, Vol. 38 No. 9, pp. 1120-1132.
- Mansor, F., & KaderAli, N.N. (2017). *Crisis Management, Crisis Communication, and Consumer Purchase Intention Post-crisis*. Global Business & Management Research. Vol. 9.
- Maree, K. (2016). *First Steps in Research*. Pretoria: Van Schaik Publishers.
- Matzler, K., Grabner-Kräuter, S., & Bidmon, S., 2008. "Risk aversion and brand loyalty: the mediating role of brand trust and brand affect". *Journal of Product & Brand Management*, 17(3), pp.154-162
- Mishra, P., & Datta, B. (2011). "Perpetual Asset Management of Customer-Based Brand Equity-The PAM Evaluator", *Current Research Journal of Social Sciences*, Vol. 3 No.1, pp.34-43.
- Paine, K. D. (2003). Guidelines for measuring trust in organisations. The Institute for public relations, available at: https://www.instituteforpr.org/wp-content/uploads/2003_MeasuringTrust.pdf, (accessed on 16 October 2020)
- Park, S.Y., & Lee, S.W. (2013) "Effects of a perceived brand crisis on product evaluation and purchase intention: the moderating roles of brand credibility and brand attachment", *Journal of Global Scholars of Marketing Science*, Vol. 23 No. 2, pp.213-226.
- Peake, W. O., Detre, J.D., & Carlson, C. C. (2014). "One bad apple spoils the bunch? An exploration of broad consumption changes in response to food recalls" *Food Policy*, Vol. 49, pp. 13-22.
- Pike, A. (2017). *Branding the nation, the place, the product*. Routledge, available at: <https://doi.org/10.1002/781118786352.wbieg0440> (accessed 9 October 2018).
- Reddy, G. (2017). *Digital marketing impact on the consumer decision making process in Nike's customer retail operations in South Africa* (Doctoral dissertation, University of Pretoria).
- Ruan, N.H., 2016. *Brand loyalty in crisis: how does strong brand loyalty affect a company during crisis under different circumstances*. Capstone for MS in Public Relations and Corporate Communication New York University.
- Sago, B. (2014). "The impact of significant negative news on consumer behaviour towards favourite brands" ,*Global Journal of Business Research*, Vol. 8 No. 1, pp.65-72.
- Salvador A. B., & Ikeda A. A. (2017). "Brand crisis management: the use of information for prevention, identification and management", *RBGN Review of Business Management*, Vol. 20 No.1.
- Salvador, A. B., Ikeda, A. A., & Crescitelli. (2015). "Local crisis of global brand and monitoring of use of social media", *Remark*, Vol. 14 No.4, pp.438-450.
- Schweon, S. J. (2015). "A closer look at Listeriosis", *Nursing 2015*, Vol. 45 No. 10, pp.68-69.
- Siomkos, G., Triantafyllidou, A., Vassilikopoulou, A., & Tsiamis, I., (2010). "Opportunities and threats for competitors in product-harm crises", *Marketing Intelligence & Planning*, Vol. 28 No. 6, pp.770-791.
- Smith, K., Williams, B., Heartsill, W., & Formby Cadbury Schweppes, M. (2016). *The Chocolate Crisis* Prem 2500: pp.1-11.
- Statistics South Africa. (2011). *Local Municipality population from census 2011*. available at: http://www.statssa.gov.za/?page_id=993&id=umhlathuze-municipality (accessed 20 October 2019)
- Struweg, I. (2019). "Three major mistakes Tiger Brands made in response to the listeriosis crisis. The Conversation. available at: <https://search.yahoo.com/%9CThree+major+mistakes+Tiger+Brands+made+in+response+to+the+listeriosis+crisis.+The+Conversation>.
- Toklu, I. T., & Kucuk, H. O. (2017). "The impact of brand crisis on consumers green purchasing intention and willingness to pay more", *International Business Research*, Vol. 10 No.1.

- Trump, R.K. (2014). "Connected consumers' responses to negative brand actions: The roles of transgression self-relevance and domain", *Journal of Business Research*, Vol. 67 No. 9, pp.1824-1830.
- Van der Vyver, A.G. (2018). "The Listeriosis Outbreak in South Africa: a Twitter Analysis of Public Reaction" In *International Conference on Management and Information Systems* September , Vol. 21, p. 22.
- Vassilikopoulou, A., Siomkos, G., Chatzipanagiotou, K. & Pantouvakis, A. (2009). "Product-harm crisis management: Time heals all wounds?", *Journal of Retailing and Consumer Services*, Vol. 16 No. 3, pp.174-180.
- Veloutsou, C. (2015). "Brand evaluation, satisfaction and trust as predictors of brand loyalty: the mediator-moderator effect of brand relationships", *Journal of Consumer Marketing*, Vol.32 No.6, pp.405-421.
- Walpuck, D., A. (2018). *Listeria Monocytogenes In The Retail Food Service Environment*. North Dakota State University Of Agriculture And Applied Science.
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.
- Werther, Jr, W. B., & Chandler, D. (2005). "Strategic corporate social responsibility as global brand insurance", *Business Horizons*, 48(4), pp. 317-324.
- West, S. (2018). H&M faced backlash over its 'monkey' sweatshirt ad. It isn't the company's only controversy. *The Washington Post* (WP Company LLC) [US]. available at: <https://www.washingtonpost.com> (accessed 9 October 2018).
- Whelan, J., & Dawar, N. (2016). "Attributions of blame following a product-harm crisis depend on consumers' attachment styles," *Marketing Letters*, Vol. 27 No. 2, pp.285–294.
- Wiese, C.M. 2014. *Measuring brand loyalty in Agribusinesses* (Doctoral dissertation).
- Xie, Y., & Keh, H. T. (2016). "Taming the blame game: Using promotion programs to counter product-harm crises", *Journal of Advertising*, Vol. 45 No. 2, pp. 211–226.
- Yannopoulou, N., Koronis E. & Elliott, R. (2011). "Media amplification of a brand crisis and its affect on brand trust", *Journal of Marketing Management*, Vol. 27 No. 5-6, pp.530-546.

A Structural Framework for Switching Intention in the Cambodian Banking Industry

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ABSTRACT

Switching intention can significantly lead to customer switching, which severely damages a service firm's number of customers and profits. Thus, the objective of this research was to help bank managers identify the significant factors regarding switching intention by examining the impacts of convenience, price, perceived value and customer satisfaction, as well as their complex relationships with switching intention. Self-administered questionnaires were used in this study to collect data from 323 banking customers in Phnom Penh, Cambodia. Furthermore, path analysis was used since it has the ability to extend multiple regressions within a framework that has more complex relationships. Hence, results firstly indicate that convenience and price significantly influenced perceived value and customer satisfaction. Next, perceived value significantly influenced customer satisfaction. Finally, customer satisfaction and price significantly influenced switching intention. The results of this paper provide suggestions as well as solutions to bank managers, for example, how to design an appropriate strategy for adjusting a reasonable price setting, and how to provide convenience in order to enhance value and satisfaction; thus, future switching propensities can be minimized.

Keywords: Banking industry, Switching intention, Customer Satisfaction, Cambodia

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Ethical Compliance: There was no conflicting interest among researchers.

INTRODUCTION

Customer switching has caused severe damage to many firms' revenues and profits, making it difficult for those firms to survive in the current competitive marketplace (Gray et al., 2017; Sombultawee, 2017; Chen & Keng, 2018; Mosavi et al., 2018). Particularly, banks are also victims that suffer from these switching incidents (Pick 2014). However, customer switching mainly results from customers' switching intentions, which occur when they desire to look for another bank (Mosavi et al., 2018). Researchers have shown that when there is intense competition in the banking market, customers enjoy various pricing options, better quality service, more advanced technological systems, and other conveniences in banking services, all of which permits customers to have higher intentions of changing their bank (Bansal and Taylor, 1999; Wirtz et al., 2014; Mosavi et al., 2018).

Regarding the banking industry in Cambodia, a number of banks, both international and local, have emerged due to the high number of workers, small and medium enterprises (SMEs) and other multinational enterprises (MNEs);

thus, there has been a significant rise in the demand for more financial and depository services in order to support the existing business operations in Cambodia (National Bank of Cambodia 2019). In response to the Cambodian people's current requests, many banks provide various pricing options, convenient transfers and payments, higher service quality, strong internet banking services, and other conveniences (IMF 2014; World Bank Group 2020). Consequently, banks compete to attract more customers (IMF 2014; National Bank of Cambodia 2019; World Bank Group 2020).

Meanwhile, as this situation continues, banking customers might simply have a high intention of changing their bank in order to try another financial service provider (Beckett et al., 2000; Clemes et al., 2007; Gonzalez & Guerrero, 2004; Hull, 2002). Thus, switching incidents occur, negatively affecting bank revenues and profits (Bansal & Taylor, 1999; Mosavi et al., 2018). As a result, customer intention to switch must be investigated in order to prevent future switching incidents.

Since many switching incidents happen, several recent studies have indicated some significant factors regarding switching intention in different contexts. For instance, Sombultawee (2017) reveals that convenience affects switching intention in the mobile service industry. Ceesay (2017) indicates that price affects switching intention in the retail banking service. Liu (2015) identifies that perceived value affects switching intention in the E-trading service industry. Gray et al. (2017) show that customer satisfaction affects switching intention in cell phone subscribers.

Although, the above factors individually influence switching intention in different contexts, their impacts on switching intention in the Cambodian banking industry remain unclear. To prevent future switching incidents, the main purpose of this study was to help bank managers identify the significant factors on switching intention by examining the impacts of convenience, price, perceived value and customer satisfaction, as well as their complicated relationships regarding switching intention. Moreover, the results of this research can help contribute knowledge to both academic scholars and service industries, especially the banking industry, in order to clearly understand the significant switching intention factors. At the same time, it also offers solutions to bank management teams, for example, how to enhance those factors which can significantly minimize future switching behavior in the banking industry.

LITERATURE REVIEW

Switching intention in service industries is defined as the customer's desire to switch from a current service provider to an alternative one (Wirtz et al., 2014). However, customer switching is categorized into two types: the partial switch (stop using some accounts) and entire switch (stop using all accounts) (Pick 2014). Many researchers have conducted investigations on customer switching in different service industries, including the banking service industry. Therefore, many antecedents concerning customer switching have been revealed, as follows:

First, several switching intention factors were found in the banking industry. For instance, Hashim et al., (2010) indicated that perceived value and relationship quality had significant connections with switching intention. Maiyaki and Mokhtar (2011) showed that service quality, corporate image, and perceived value had significant connections with switching intention. Abduh et al., (2012) found that staff behavior, physical appearance, accessibility and cost were all significantly connected with switching intention. Ceesay (2017) showed that price, corporate image, satisfaction, quality of services and trust had connections with switching intention.

Next, many switching intention factors in the phone service industry were also reported. For example, Chuang (2011) found that satisfaction, switching cost, attractiveness and habit significantly influenced switching intention. Nikbin et al., (2012) showed that distributive, procedural and informational justices influenced switching intention. Malhotra and Malhotra (2013) revealed that innovation, lock-in and service quality potentially influenced switching intention. Chang and Hsu (2017) illustrated that perceived usefulness, perceived ease of utilization, and privacy influenced switching intention. Hassan and AbouAish (2018) revealed that satisfaction, emotional value, and attitude to switching affected switching intention.

Similarly, some antecedents of switching intention in hotel services were identified. For instance, Han et al., (2011) found that service performance, satisfaction and switching barriers significantly affected switching intention. Lehto et al., (2015) pointed out that service quality, satisfaction, switching cost and variety significantly affected switching intention.

Likewise, switching intention in the restaurant service industry was influenced by several factors. For example,

Han and Hyun (2013) indicated that social image, ideal image, satisfaction and trust had significant relationships with switching intention. Wu and Ai (2016) indicated that satisfaction and image significantly affected switching intention.

Furthermore, some factors that affected switching intention in the airline industry were also reported. For instance, Wu et al., (2017) revealed that satisfaction, loyalty and reputation affected switching intention. Liang et al., (2018) revealed that satisfaction and trust had connections with switching intention.

Lastly, some switching intention factors in other industries were also investigated. For instance, Anton et al., (2007) showed that service quality and commitment affected switching intention in the insurance service industry. However, Kang et al., (2019) identified that convenience, flexible service, and impedance had connections with switching intention in the public transport service industry.

Background of Factors

Convenience

Convenience is the propensity of ease which helps reduce customers' time and effort in the process of service utilization (Liu et al., 2015). Customers generally evaluate service convenience by observing the level of effort and time required to use the products or services (Pham et al. 2018). A clear observation of service convenience can be made using the five dimensions of convenience: decision, access, benefit, transaction and post-benefit conveniences (Kaura 2013). Furthermore, convenience in the banking industry can be created by providing more ATM services, internet banking services, mobile banking and other service transactions to the customers (Gerrard & Cunningham 2004). Overall, many researchers are still interested in studying the impact of convenience on consumer behavior because it could affect an individual's psychological stress while he or she is using or purchasing products or services (Roy, Lassar & Shekhar 2016; Garcia-Fernandez et al. 2018).

Price

Price refers to the financial value that customers pay for products or services (Narteh 2013). Unlike other service industries, price in the banking industry can consist of interest rates, processing fees, penalty charges and so on (Keaveney 1995). Price has been used to assess the degree of service or product performance (Han & Ryu 2009). In addition, it also influences customer behavior, which is involved in a customer's expectations, decision making and other individual judgments (Voss et al., 1998). However, the reaction from customers to price fluctuations can vary across industries (Voss et al. 1998; Homburg, Hoyer & Koschate 2005). Thus, many marketing studies are still inconclusive regarding customer perception on price rather than actual price in their evaluation on the products or services that they have experienced (Han & Ryu 2009).

Perceived Value

Perceived value refers to the degree of value of service or product which results from the overall evaluation of service performance and financial sacrifice (Heyprakhon et al., 2016). Similarly, Zehir et al. (2014) reveal that when customers want to check the degree of perceived value, they can make a comparison between perceived benefit and perceived sacrifice. If the perceived benefit is higher than the perceived sacrifice, customers generally think that the firm's products have a high value (Chen & Tsai 2008). In contrast, if the perceived sacrifice is higher than the perceived benefit, the customers are likely to perceive a lower value of service (Zehir et al. 2014). So far, the researchers suggest that perceived value can be a significant indicator in determining degree of satisfaction and future purchase decisions (Chen & Tsai 2008; Zehir et al. 2014).

Customer Satisfaction

Customer satisfaction refers to the customer's degree of joy that results from the evaluation of service performance and expectation (Anderson & Sullivan 1993; Mahmoud, Hinson & Adika 2018). Likewise, Kotler and Keller (2016)

highlight that satisfaction can be an individual's emotional pleasure or disappointment, which derives from a comparison between the perceived performance of a product and his or her expectations. When customers want to purchase any product or service, they generally look at the level of received benefits, such as convenience, quality, and other innovations from the service firms (Zameer 2010; Setyono et al. 2015). On the other hand, if service performance falls below the person's expectations, he or she will not be happy with the service provider (Setyono et al. 2015). Consequently, it can affect the future relationship between the customer and the service firm (Zameer 2010). Overall, customer satisfaction can determine the degree of customer loyalty, which can help maintain the overall well-being of the company (Gray et al. 2017).

Hypothesis Development

Association between Convenience and Perceived Value

Evaluating convenience in service by comparing the particular degree of expected time and effort for finishing tasks with the actual service performance can allow us to detect the degree of service value (Kaura 2013). In the mobile application service in China, Liu et al. (2015) reveal that customers really value a service that can offer more conveniences, especially with little effort and a short period of time for completing their tasks. In banking markets, convenience can be increased by providing customers with more ATM services, internet banking services and longer operating hours (Wungwanitchakorn 2002; Gerrard & Cunningham 2004). As a result, convenience permits customers a more positive view of their current bank while placing a greater value on the services they are currently using (Pham et al., 2018; Zhang et al., 2019). Therefore, the hypothesis is:

Hypothesis 1: Convenience reveals a strong link with perceived value.

Association between Convenience and Customer Satisfaction

Convenience has been seen as a perceived benefit to customers because it permits customers to complete their tasks in less time and with less effort (Liu et al., 2015). According to a study on internet banking services in Thailand, when customers receive these benefits from their service firms, they will think that these services have a high value (Wungwanitchakorn, 2002). In addition, positive customer attitudes can psychologically impact customer happiness, causing them to gain more trust and enjoy utilizing more services from service providers (Roy et al., 2016). In other words, when customers see more value inside service performance, they will be happier with their service providers (Kaura et al., 2015; Reimers & Chao, 2014). Therefore, the hypothesis is:

Hypothesis 2: Perceived value reveals a strong link with customer satisfaction.

Association between Convenience and Switching Intention

Previous studies also reveal that convenience in service can significantly impact customer behavior (Roy et al., 2016). In addition, convenience in service has been described as a significant benefit for customers, such as ease in product use or service utilization, time saved, shorter distances and less effort (Pham et al., 2018; Zhang et al., 2019). Service firms that can provide higher service convenience to their customers will definitely get lots of good feedback and other positive comments from their customers, who in turn will have good relationships with their service providers (Djan & Adawiyyah, 2020; Khare et al., 2012). Therefore, customers will be happier, more trusting, and continue using services from their current service firms (Djan & Adawiyyah 2020). In contrast, one study on Thai customer behavior in the mobile service industry showed that if firms provide poor service conveniences, the customers will no longer be satisfied with their current service firms. Consequently, they will have a greater intention to switch from their current firms to other more competitive ones (Sombultawee 2017). As a result, providing high service conveniences to customers lowers switching intention (Sombultawee 2017; Chen & Keng 2018). Therefore, the hypothesis is:

Hypothesis 3: Convenience reveals a strong link with switching intention.

Association between Price and Perceived Value

Price refers to the financial value that customers pay for products or services (Narteh 2013). Regarding banking services, processing fees, penalties, and interest are all parts of price (Keaveney 1995). Customers usually mention the level of price as a pointer to a certain degree of service quality (Clemes et al., 2010). Similarly, it reveals that high prices can allow customers to have a high positive perspective or positive expectation towards service performance (Clemes et al., 2010). In other words, it makes customers perceive more value from the firm's service (Mayr & Zins, 2012). Thus, Zietsman et al. (2019), who study consumer behavior in the banking service industry, also underline that price significantly has a strong connection with perceived value. Therefore, the hypothesis is:

Hypothesis 4: Price reveals a strong link with perceived value.

Association between Price and Customer Satisfaction

Price has created lots of sensitivity that impacts buyers' satisfaction (Campo & Yague, 2008). Thus, two different scenarios are raised in this paper. First, a study in the education service industry shows that some groups of customers take it seriously and are not happy with a firm after the price is raised (Homburg et al., 2005). This situation happens because they probably lose their purchasing power on these particular products or services; therefore, the negative reaction on price still exists (Homburg et al., 2005).

In contrast, other groups of customers view that the high degree of price can indicate a particular level of service performance, which can allow customers to see more service value and can positively impact their customer satisfaction (Han & Ryu, 2009). According to a study on customer behavior in stationery products, people believe that high prices will demonstrate more customer satisfaction (Dodds et al., 1991). As a result, according to these two contradicting ideas, the link between price and customer satisfaction still raises more questions about the service industry, especially the banking industry. Therefore, the hypothesis is:

Hypothesis 5: Price reveals a strong link with customer satisfaction.

Association between Price and Switching Intention

Price has been reported as a sensitive topic that can impact customers' behavior (Keaveney & Parthasarathy 2001); therefore, marketing scholars have revealed two different views as follows: First, in service branding, price is used to measure the quality of a product or service, which can prolong a good relationship between the customer and service provider (Berry 2000). In this case, as long as customers receive high service performance or quality to support their business operations, they are willing to pay the high price (Phan & Ghantous 2013). Likewise, it is argued that high price does not cause any high switching intention (Farquhar & Panther 2008).

On the other hand, Ceesay (2017), who investigates switching behavior in retail banking service, indicates that the opposite perspective has been revealed, that is, if the bank increases the price on the current service, the customers will lower their interest in staying with the bank. Furthermore, previous results also show that incidents of customer switching occur due to price dissatisfaction with the service, especially among those who have a low income (Khan et al. 2010). Therefore, it is assumed that high prices possibly increase switching intention (Ceesay 2017; Zakiy 2019). As a consequence, according to the two above arguments, the link between price and switching intention has raised more curiosity among researchers. Therefore, the hypothesis is:

Hypothesis 6: Price reveals a strong link with switching intention.

Association between Perceived Value and Customer Satisfaction

Creating more value in customers' perception can enhance customer satisfaction; therefore, it can strengthen the relationship between customer and firm (Zehir et al. 2014). A study on online shopping behavior reveals that if customers receive more benefits from the services offered by the company, customers will perceive more value from the service firm and enjoy using it (Chang & Wang 2011). Moreover, if the service is performed well, it certainly raises

the degree of customer satisfaction with the current service provider (Jen et al, 2011). In other words, when customers see more value in the products or services, they are happier to purchase more products or services from the firms (Chang & Wang 2011). As a result, it has been indicated that perceived value definitely has a significant association with customer satisfaction (Edward & Sahadev, 2011). Therefore, the hypothesis is:

Hypothesis 7: Perceived value reveals a strong link with customer satisfaction.

Association between Customer Satisfaction and Switching Intention

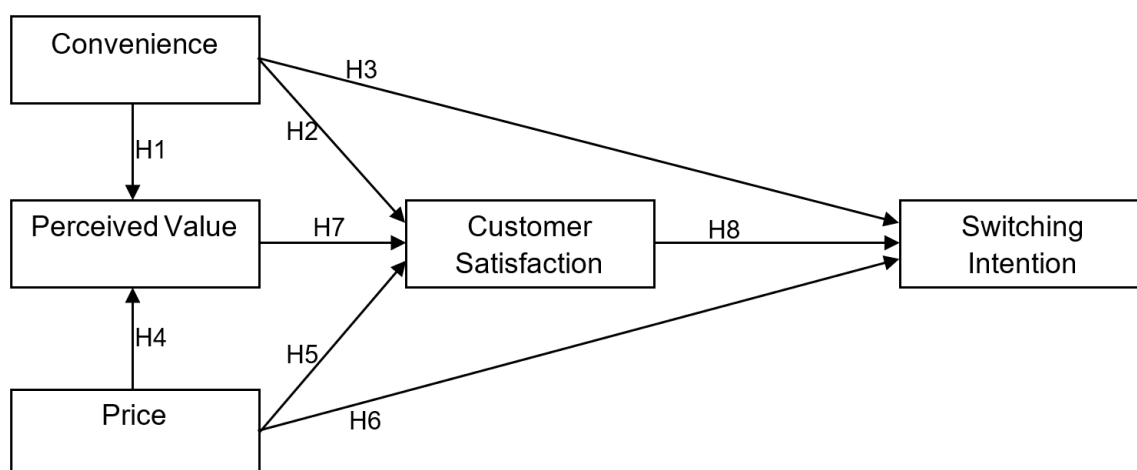
Customers feel happier unless the firm performs a certain degree of service to match, at least, with an acceptable degree of customers' expectations or demands (Kotler et al., 2005). In fact, it has been explained that changes in customer satisfaction can lead to changes in the customers' overall behavior (Ranaweera & Prabhu 2003). Likewise, it is reported that if customers enjoy consuming services from a service firm, they are likely to come back and repurchase (Gray et al., 2017). In other words, if their level of satisfaction increases, their intention to change service providers will decrease (Kang et al., 2007). Likewise, the studies in the financial service industry also indicate that customer satisfaction absolutely has a strong association with intention to switch (Bansal and Taylor, 1999; Mosavi et al., 2018). Therefore, the hypothesis is:

Hypothesis 8: Customer satisfaction reveals a strong link with switching intention.

Finally, the whole switching intention model is proposed in Figure 1. It indicates how convenience and price influence perceived value, customer satisfaction and switching intention. After that, perceived value influences customer satisfaction while customer satisfaction influences switching intention.

METHODOLOGY

FIGURE 1
CUSTOMER'S SWITCHING INTENTION MODEL



Data collection

One report mentioned that the total number of bank accounts could not represent the real number of customers because an individual could open more than one account in different banks, and thus, the total population was not specified (Gonzalez & Guerrero 2004). Therefore, the sample size was calculated through the formula of Cochran in non-probability sampling (Zikmund et al., 2013). In addition, Gravesteijn et al. (2018) revealed that approximately 30% of adults in Cambodia had accessed banking services. The result of the sample size was calculated below:

$$n = \frac{Z^2 pq}{E^2}$$

Where:

- n = number of items in the sample
- Z^2 = square of the confidence level in standard error units (1.96)
- p = estimated proportion of successes (30%)
- q = 1 - p , or estimated proportion of failures (100% - 30% = 70%)
- E^2 = square of the maximum allowance for errors between the real proportion and the sample proportion (0.05)

$$n = \frac{(1.96)^2(0.3)(0.7)}{(0.05)^2} = 323$$

After that, a self-administered questionnaire was handed out at universities, supermarkets, parks, and other convenient places in Phnom Penh, Cambodia. Next, those participants who at least had one bank account at any bank in Cambodia were allowed to fill in the questionnaire. All of the participants were asked for their consent before filling in the questionnaire, and their personal information was kept secret. Then, the researchers closely guided and helped them if they had a problem with illiteracy or other misunderstandings. Finally, all of the survey instruments were collected at the end of March 2020.

Measurement Items

All of the variables' measurement items were adopted from previous papers which most of the items were used to survey in the banking industry and were published in Scopus and Web of Science. First, convenience measurement items were adopted from Kaura (2013). Next, price measurement items were adopted from Clemes et al. (2010). Then, satisfaction measurement items were adopted from Gray et al. (2017). Finally, the measurement items of perceived value and intention to switch were adopted from Mosavi et al. (2018).

The 5-point Likert scale was implemented in the measurement items.

This allowed customers to rate according to their perspectives (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree). Unlike other scales, the 5-point Likert scale could provide an acceptable response rate and response quality since it reduced the participants' degree of frustration (Babakus & Mangold 1992). In addition, the 5-point Likert scale contained the mid-point which clearly marked the distinction between negative and positive answers from the respondents (Garland 1991). Therefore, implementing the 5-point Likert scale was significantly suitable with the data collection in Phnom Penh, the capital city of Cambodia, since most of the people were often rushing to go to work or study.

Validity, Reliability and Variables' Characteristics

After the main items in the survey were translated into Khmer (Cambodian Language), three experts checked the content validity by using Item-Objective Congruence (IOC) with rating scores (+1= not understand, 0= confusing, and +1= understand). As a result, all of the experts were satisfied with the translated version.

Next, the reliability of the content was also checked through Cronbach's Alpha; its scores above 0.7 indicated reliability (Mosavi et al. 2018). According to Table 1, all Cronbach's Alpha scores met the requirements which proved content reliability.

Lastly, the mean and standard deviation scores of dependent and independent variables are also provided in Table 1. The independent variables' range of scores (Mean=3.39 to 3.87, St. Deviation=0.52 to 0.82) meant that customers agreed with the factors. Therefore, the results generated mean scores (2.10) and St. Deviation scores (0.76) which indicated customers' disagreements upon switching intention.

TABLE 1
VARIABLE CHARACTERISTICS

Construct	Measuring Items	Mean	St. Dev	Alpha α
Convenience	1. This bank offers variety of accessibilities such as (online, telephone, by person, ATM).	3.39	0.52	0.74
	2. This bank has convenient hours to operate service to customers.			
	3. This bank's location is convenient to access.			
	4. I can get my task done with less effort.			
	5. I can finish my transaction with reasonable time.			
	6. This bank's products are easy to utilize.			
Price	7. The bank charge low fees.	3.83	0.78	0.85
	8. The bank charged low interest for loans.			
	9. The bank charged low interest for mortgages.			
	10. The bank provides high interest rates on savings accounts.			
Perceived Value	11. Comparing to other banks, this bank provides attractive service costs.	3.59	0.67	0.96
	12. Comparing to other banks, I pay fairly to this bank for similar services.			
	13. Comparing to other banks, I received other free services from this bank.			
	14. Compare to how much I pay to how much may receive from other banks, according to my opinion I received good value from this bank.			
	15. I receive an acceptable quality from this bank			
Customer Satisfaction	16. I satisfy with the service of this bank.	3.87	0.82	0.81
	17. Generally, I feel happy anytime I buy the service of this bank.			
	18. It is a satisfied experience to the service of this bank.			
	19. My option to utilize service of this is a wise option.			
	20. According to my opinion, my decision to utilize the service of this bank for my service needs is correct decision.			
Switching Intention	21. I think I will leave my current bank soon.	2.10	0.76	0.90
	22. I seem to change to other banks if the contract between me and bank reaches the deadline.			
	23. I've usually thought of switching this bank.			
	24. I will be likely to change this bank to another that provides better services.			
	25. I want to change this bank due to this bank usually had problems with me			

Data analysis

Data were analyzed using the path analysis technique, which examined the entire structural relationships of the focused variables; it had the capacity to extend multiple regressions (Streiner 2005). Moreover, due to the path analysis that was used to measure the impacts among independent and dependent variables within the structure (Grapentine 2000), the statistical outcome also appeared along with the model feature.

RESULTS

Interviewees' Personal Information

This section revealed all relevant information about participants' personal information; see Table 2. First, 53% were female while 47% were male. Next, participants were mostly young with an age between 18-28 years (43.3%), while few were between 51-61 years of age (7.4%). Then, their education was mainly bachelor's degree (28.8%), while few had only primary school (9.3%). Finally, most had an experience of below five years (65%).

TABLE 2
PARTICIPANTS' PROFILE

Variables	Description	Frequency (n= 323)	Percentage
Gender	Male	153	47
	Female	170	53
	Total	323	100

Variables	Description	Frequency (n= 323))	Percentage
Age	18-28 years	140	43.3
	29-39 years	120	37.2
	40-50 years	39	12.1
	51-61 years	24	7.4
	Total	323	100
Education	Primary Education	30	9.3
	Secondary Education	35	10.8
	High School Education	83	25.7
	Associate's Degree	47	14.6
	Bachelor's Degree	93	28.8
	Master's Degree	35	10.8
Experience interacting with bank	Total	323	100
	Below 5 years	210	65.0
	5-10 years	113	35.0
	11-16 years	0	0
	Total	323	100

Evaluation on Assumption Test

Multi-Collinearity Diagnostic

Before analysis, the data were checked with three major assumptions, namely multicollinearity, normality and linearity. First, the data were checked to investigate multicollinearity by analyzing correlations among variables with suggested scores (above 0.80 indicated as multi-collinearity) which could harm the outcome of the data analysis (Kaura et al., 2015). According to Table 3, no multi-collinearity was suspected in this study since all the variables' correlation scores were lower than 0.8.

TABLE 3
IMPLIED CORRELATIONS

Variable	1	2	3	4	5
Convenience	1				
Price	0.619	1			
Perceived Value	0.721	0.756	1		
Customer Satisfaction	0.779	0.724	0.797	1	
Switching Intention	-0.561	-0.609	-0.580	-0.655	1

Normality Test

Then, normality was also checked for reliable data collection by checking the scores of Skew and Kurtosis in each variable that remained between the range of scores from -1.96 to +1.96 (Ghasemi & Zahediasl 2012; Field 2013; Horse 2019). According to Table 4, the scores of each variable remained between the suggested range of scores which indicated reliable data.

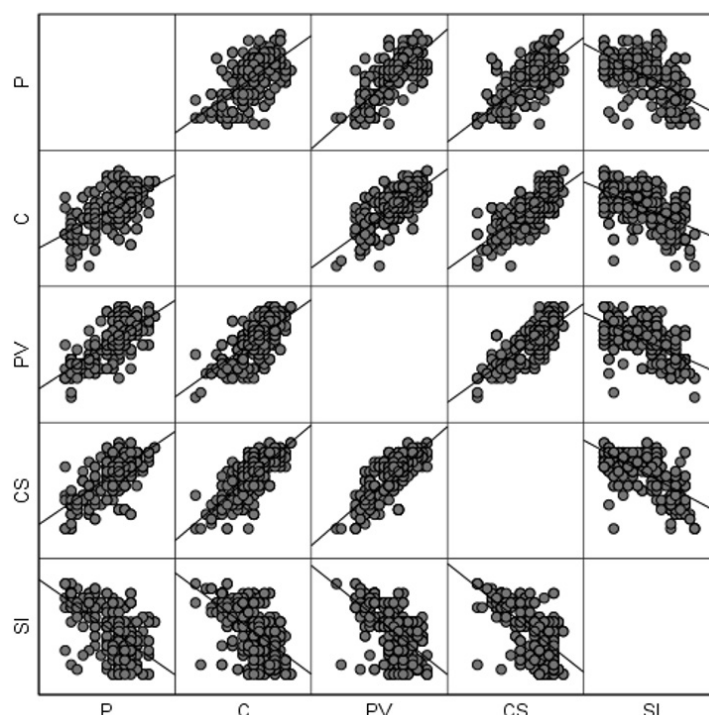
TABLE 4
NORMALITY

Variable	Skew	Kurtosis
Convenience	-0.422	-0.242
Price	-0.544	-0.583
Perceived Value	-0.211	-0.664
Customer Satisfaction	-0.716	-0.505
Switching Intention	-0.097	-1.046

Linearity Test

Finally, linearity was checked to ensure linear relationships. If the scatter dots in each variable gathered around the linear line, it was assumed that there was a linear relationship between the dependent and independent variables (Field 2013). According to Figure 2, there were strong linear relationships between dependent and independent variables because the scatter dots significantly remained around the linear lines.

FIGURE 2
LINEARITY TEST



Model Fit Evaluation on Path Analysis

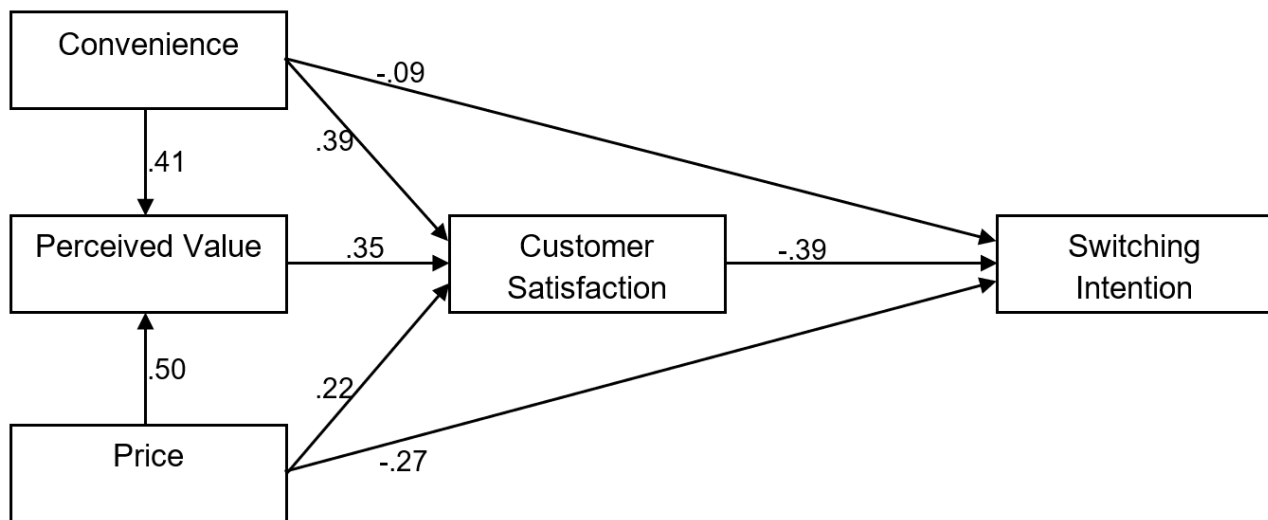
Before revealing the path analysis outcomes, the degree of each model fit indicator was evaluated to ensure that the current data in the constructed model were suitable to be analyzed using path analysis. Therefore, there were at least three normal fit indicators, such Goodness Fit Index (GFI), Normed Fit Index (NFI), and the Comparative Fit Index (CFI). All were checked with the scores above 0.9 (indicated as good fit in model construct)(Stage et al., 2004). Furthermore, the Root Mean Square Error of Approximation (RMSEA) was also checked in order to find the absolute model fit for path analysis with suggested scores below 0.08 (Stage et al., 2004). As a result, according to Table 5, all of the indicators met the requirements, which made it possible to generate path analysis results.

TABLE 5
MEASUREMENTS OF STRUCTURAL MODEL FIT

Goodness Indicator	Scores	Degree of Fit
GFI	0.999	Good Fit
NFI	0.999	Good Fit
CFI	1.000	Good Fit
RSMEA	0.000	Absolute Fit

The outcomes from Path Analysis

FIGURE 3
OUTCOMES OF PATH ANALYSIS



The outcomes from both Figure 3 and Table 6 are as follow: Convenience significantly affected perceived value and customer satisfaction

($\beta = 0.41$, $p < 0.05$ and $\beta = 0.39$, $p < 0.05$ respectively). However, it showed no effect on switching intention ($\beta = -0.09$, $p > 0.05$).

Next, price significantly affected perceived value and customer satisfaction

($\beta = 0.50$, $p < 0.05$ and $\beta = 0.22$, $p < 0.05$ respectively). Furthermore, price also significantly affected switching intention ($\beta = -0.27$, $p > 0.05$).

After that, perceived value significantly affected customer satisfaction ($\beta = 0.35$,

$p < 0.05$). Finally, customer satisfaction significantly affected switching intention ($\beta = 0.39$, $p < 0.05$).

To sum up, the hypothesis summary revealed that 7 hypotheses were accepted while only hypothesis 3 was rejected.

TABLE 6
HYPOTHESIS SUMMARY

Relationship	Sig. Degree (p)	Results
H ₁ : Convenience and Perceived Value	0.000*	Accepted
H ₂ : Convenience and Customer Satisfaction	0.000*	Accepted
H ₃ : Convenience and Switching Intention	0.164	Rejected
H ₄ : Price and Perceived Value	0.000*	Accepted
H ₅ : Price and Customer Satisfaction	0.000*	Accepted
H ₆ : Price and Switching Intention	0.000*	Accepted
H ₇ : Perceived Value and Customer Satisfaction	0.000*	Accepted
H ₈ : Customer Satisfaction and Switching Intention	0.000*	Accepted

Note: * indicates $p < 0.05$.

DISCUSSION AND CONCLUSION

Hypothesis Discussion

Regarding the effects on perceived value: price had a stronger positive effect on perceived value that was consistent with (Mayr and Zins, 2012; Zietsman et al., 2019). Price had been used as an indicator to assess the level of service quality; thus, a higher degree of price allowed people to give more positive views to the banks. In

contrast, low performance in services could be expected when a low price was spotted in the banking service. Finally, convenience had a positive effect on perceived value that was consistent with (Pham et al., 2018; Zhang et al., 2019). More value could be viewed regarding the bank's services when the bank could provide more support to customers' daily business operations, such as shortening the time of transactions, providing more convenient branches and extending operating hours. Therefore, conveniences in the banking service could definitely increase perceived value.

Subsequently, regarding the effects on customer satisfaction, convenience was the first mover that had a positive effect on customer satisfaction which was consistent with previous studies (Kaura et al., 2015; Reimers & Chao, 2014).

A study on online shopping behavior in South Africa also supported that once the application service was easy to use, saving time and effort, customers were happy to shop there again (Mpinganjira 2015). Second, perceived value had a positive effect on customer satisfaction that was consistent with previous studies (Chang & Wang 2011; Edward & Sahadev 2011). A study from online shoppers in South Africa agreed with the result that when customers gave more value to the current service, they also demonstrated an emotional pleasure toward the service firm at the same time (Chinomona et al., 2014). Lastly, price had a positive effect on customer satisfaction that was not consistent with Homburg et al. (2005) but was consistent with Dodds et al. (1991) and Han and Ryu (2009). Customers expected a certain level of service quality after they saw certain price levels in each banking service category. Therefore, high prices increased positive expectations, which allowed customers to enjoy using more services with their current banks.

Consequently, regarding the effects on switching intention, customer satisfaction was the strongest influencer that had a negative effect on switching intention, and it was consistent with previous studies (Bansal and Taylor, 1999; Mosavi et al., 2018). When customers enjoyed using their current bank services, they seemed to demonstrate a lower intention of leaving their banks. Therefore, if they were happy with their current bank, they would continue to trust and use that bank. Second, price had a negative effect on switching intention that was not consistent with Khan et al. (2010) and Ceesay (2017) but was consistent with Farquhar and Panther (2008) and Phan and Ghantous (2013). A high degree of price could increase positive views and expectations from customers; therefore,

it could also improve satisfaction and trust, according to the high level of service performance from the current banks. Likewise, bank customers in Cambodia seemed to have positive view on the banks' service performance after they saw high price tags. Although, they were from low income country, they were not afraid to pay the high price in order to get high service quality. As a result, they were not likely to have a high intention of changing to another bank. Finally, convenience had no significant effect on switching intention. This was not consistent with previous studies (Sombultawee 2017; Chen & Keng 2018).

Theoretical Contribution

Theoretically, the study firstly confirms the relationships among convenience, perceived value, customer satisfaction and switching intention as suggested by the literature. However, customer satisfaction significantly appears to be a full mediator not only between perceived value and switching but also between convenience and switching intention. Particularly, the mediating impact of customer satisfaction on relationship between convenience and switching intention causes convenience to indicate no direct effect on switching intention (Hume & Mort 2010). Thus, it can be implied that if convenience increases, it does not make any change to switching intention; however, it increases perceived value and customer satisfaction, which can ultimately reduce switching intention. In other words, when customers receive a high level of service convenience from the banks, they seem to highly evaluate their level of perceived value and satisfaction, which can finally lower their intention to switch from their current banks (Bansal and Taylor, 1999; Mosavi et al., 2018).

Furthermore, the study also indicates a significant confirmation of the relationships among price, perceived value, customer satisfaction and switching intention, as suggested by the previous literature. However, customer satisfaction somehow plays a role as a partial mediator between price and switching intention, which somehow allows price to

have a direct impact on switching intention (Khalil & Abed 2014). This circumstance exhibits that a change in price leads to a change in not only perceived value and customer satisfaction, but also switching intention. In other words, high prices can make customers significantly perceive more value and be happier with their current banks, and at the same time have a lower intention to switch banks. On the other hand, these results raise the need for more significant studies on price to customer behavior in the banking service industry because price can be sensitive in different countries' economies, which can influence customer behavior (Farquhar & Panther 2008; Phan & Ghantous 2013).

Consequently, many banking customers are still being observed by researchers from around the world as customers contribute significantly to increases in market activities; therefore, they can positively impact the overall economy (Cetorelli 2012). Hence, customer satisfaction and price are recommended for greater improvements so that customers can continue using more services with their current banks.

Practical Implication

This study reveals how price and satisfaction significantly affect switching intention in the banking service industry, and thus it can demonstrate some important implications. Therefore, there are two recommendations that have been outlined in this paper.

First, to achieve a lower switching intention, overall prices need to be reviewed and adjusted to match the current service degree of performance since customers mainly use price to measure the level of service performance. Therefore, price can help increase value and satisfaction while reducing the degree of switching intention (Farquhar & Panther 2008; Phan & Ghantous 2013).

Second, customer satisfaction can be achieved by increasing service conveniences, which can ultimately reduce switching intention. As convenience makes customers' lives easier, gaining more advantages in their daily business activities, they can enjoy using more services with their banks. As a result, they will remain with their current banks. For example, the top managerial levels in firms should consider upgrading their artificial intelligence systems (AI) for more convenient transfer and payment detections while increasing operating hours. Furthermore, management should place more ATM services around cities while simplifying functional usage in order to increase easy service utilization for customers.

Conclusion and Limitation of Study

In conclusion, the current study confirmed that convenience firstly has both significant effects on perceived value and customer satisfaction. However, it has no significant effect on switching intention. Second, price has significant effects on perceived value, customer satisfaction and switching intention. Next, perceived value has a significant effect on customer satisfaction. Lastly, customer satisfaction has a significant effect on switching intention.

On the other hand, the objective of this study was completed. However, the paper also has some limitations. Firstly, the sample size in this study was still small compared with the whole population of Cambodia, which might limit the ability to generalize the whole country's perception. A new study should enlarge the number of participants so that the results can be broadly generalized.

Secondly, the convenience technique that was used to speed up data collection probably also contributed to some degree of bias in the outcome of this paper, if the researchers accidentally interviewed people who had the same characteristics (Mosavi et al. 2018). A new study is suggested in order to use different methods and thus ensure a low propensity of bias.

Finally, the results in this study are based on the Cambodian people's perspectives, which might be impossible to generalize in other contexts that comprise different people's perceptions. Thus, a new study is recommended in order to have cross national studies that examine the various concepts across different cultures on customer switching behavior (Farah 2017).

REFERENCES

- Abduh, M., Kassim, S. & Dahari, Z., 2012, 'Customer Satisfaction and Switching Behavior in Islamic Banking : Evidence from Indonesia', *School of Doctoral Studies (European Union) Journal*, (Table 1), 209–215.
- Anderson, E.W. & Sullivan, M.W., 1993, 'The antecedents and consequences of customer satisfaction for firms', *Marketing Science*, 12(2), 125–143.
- Anton, C., Camarero, C. & Carrero, M., 2007, 'The Mediating Effect of Satisfaction on Consumer's Switching Intention', *Psychology and Marketing*, 24(6), 511–538.
- Babakus, E. & Mangold, W.G., 1992, 'Adapting the SERVQUAL scale to hospital services: an empirical investigation', *Health services research*, 26(6), 767–786.
- Bansal, H.S. & Taylor, S.F., 1999, 'The service provider switching model (SPSM): A model of consumer switching behavior in the services industry', *Journal of Service Research*, 2(2), 200–218.
- Beckett, A., Hewer, P. & Howcroft, B., 2000, 'An exposition of consumer behaviour in the financial services industry', *International Journal of Bank Marketing*, 18(1), 15–26.
- Berry, L.L., 2000, 'Cultivating service brand equity', *Journal of the Academy of Marketing Science*, 28(1), 128–137.
- Campo, S. & Yague, M.J., 2008, 'Research note: Effects of price on tourist satisfaction', *Tourism Economics*, 14(3), 657–661.
- Ceesay, L.B., 2017, 'Consumer-Bank Association: Determinants of Consumer Bank Switching Intention, Case of the Gambia Retail Banking Sector', *Journal of Business & Financial Affairs*, 06(04), 2–8.
- Cetorelli, N., 2012, *Banking and Real Economic Activity*, 1st edn., Oxford University Press.
- Chang, H.H. & Wang, H.W., 2011, 'The moderating effect of customer perceived value on online shopping behaviour', *Online Information Review*, 35(3), 333–359.
- Chang, Y.W. & Hsu, P.Y., 2017, 'An empirical investigation of organizations' switching intention to cloud enterprise resource planning: a cost-benefit perspective', *Information Development*, 1–13.
- Chen, C.F. & Tsai, M.H., 2008, 'Perceived value, satisfaction, and loyalty of TV travel product shopping: Involvement as a moderator', *Tourism Management*, 29(6), 1166–1171.
- Chen, Y.H. & Keng, C.J., 2018, 'Utilizing the Push-Pull-Mooring-Habit framework to explore users' intention to switch from offline to online real-person English learning platform', *Internet Research*, 29(1), 167–193.
- Chinomona, R., Masinge, G. & Sandada, M., 2014, 'The influence of E-service quality on customer perceived value, customer satisfaction and loyalty in South Africa', *Mediterranean Journal of Social Sciences*, 5(9), 331–341.
- Chuang, Y.F., 2011, 'Pull-and-suck effects in Taiwan mobile phone subscribers switching intentions', *Telecommunications Policy*, 35(2), 128–140.
- Clemes, M.D., Gan, C. & Zhang, D., 2010, 'Customer switching behaviour in the Chinese retail banking industry', *International Journal of Bank Marketing*, 28(7), 519–546.
- Clemes, M.D., Gan, C. & Zheng, L.Y., 2007, 'Customer switching behavior in the New Zealand banking industry', *Banks and Bank Systems*, 2(4), 50–65.
- Djan, I. & Adawiyyah, S.R., 2020, 'The Effect of Convenience and Trust to Purchase Decision and Its Impact to Customer Satisfaction', *International Journal of Business and Economics Research*, 9(4), 269–269.
- Dodds, W.B., Monroe, K.B. & Grewal, D., 1991, 'Effects of Price, Brand, and Store Information on Buyers' Product Evaluations', *Journal of Marketing Research*, 28(3), 307–319.
- Edward, M. & Sahadev, S., 2011, 'Role of switching costs in the service quality, perceived value, customer satisfaction and customer retention linkage', *Asia Pacific Journal of Marketing and Logistics*, 23(3), 327–345.
- Farah, M.F., 2017, 'Consumers' switching motivations and intention in the case of bank mergers: A cross-cultural study', *International Journal of Bank Marketing*, 35(2), 254–274.

- Farquhar, J.D. & Panther, T., 2008, 'Acquiring and retaining customers in UK banks: An exploratory study', *Journal of Retailing and Consumer Services*, 15(1), 9–21.
- Field, A., 2013, 'The beast of bias', *Discovering statistics using IBM SPSS statistics*, 4th edn., pp. 222–277, SAGE Publication Ltd, Washington, D.C.
- Garcia-Fernandez, J., Galvez-Ruiz, P., Fernandez-Gavira, J., Velez-Colon, L., Pitts, B. & Bernal-Garcia, A., 2018, 'The effects of service convenience and perceived quality on perceived value, satisfaction and loyalty in low-cost fitness centers', *Sport Management Review*, 21(3), 250–262.
- Garland, R., 1991, 'The mid-point on a rating scale: Is it desirable?', *Marketing bulletin*, 2(1), 66–70.
- Gerrard, P. & Cunningham, J.B., 2004, 'Consumer switching behavior in the Asian banking market', *Journal of Services Marketing*, 18(3), 215–223.
- Ghasemi, A. & Zahediasl, S., 2012, 'Normality tests for statistical analysis: A guide for non-statisticians', *International Journal of Endocrinology and Metabolism*, 10(2), 486–489.
- Gonzalez, M.V.R. & Guerrero, M.M., 2004, 'New competitors in banking service', *Journal of Financial Services Marketing*, 9(2), 126–137.
- Grapentine, T., 2000, 'Path Analysis VS. Structural Equation Modeling', *Marketing Research*, 12(3), 12–20.
- Gravesteijn, R., Jain, M.K. & Lee, J., 2018, *Examining Customer Journeys at Financial Institutions in Cambodia: Using Big Data to Advance Women's Financial Inclusion*.
- Gray, D.M., D'Alessandro, S., Johnson, L.W. & Carter, L., 2017, 'Inertia in services: causes and consequences for switching', *Journal of Services Marketing*, 31(6), 485–498.
- Han, H. & Hyun, S.S., 2013, 'Image Congruence and Relationship Quality in Predicting Switching Intention: Conspicuousness of Product use as a Moderator Variable', *Journal of Hospitality & Tourism Research*, 37(3), 303–329.
- Han, H., Kim, W. & Hyun, S.S., 2011, 'Switching intention model development: Role of service performances, customer satisfaction, and switching barriers in the hotel industry', *International Journal of Hospitality Management*, 30(3), 619–629.
- Han, H. & Ryu, K., 2009, 'The roles of the physical environment, price perfection, and customer satisfaction in determining customer loyalty in the restaurant industry', *Journal of Hospitality and Tourism Research*, 33(4), 487–510.
- Hashim, N.H., Latifah, S. & Kadir, S.A., 2010, 'The Effect Of Corporate Image, Customer Perceived Value, Relationship Quality And Switching Intention Among Islamic Banking Customers In Malaysia', *Business Management Quaterly Review*, 1(4), 60–74.
- Hassan, S.O. & AbouAish, E.M., 2018, 'The impact of strategic vs. tactical cause-related marketing on switching intention', *International Review on Public and Nonprofit Marketing*, 15(3), 253–314.
- Heyprakhon, T., Rinchumphu, D. & Janjamlha, T., 2016, 'Domestic tourists ' perceived value on Asean vernacular standard homestay', *ABAC Journal*, 36(2), 53–77.
- Homburg, C., Hoyer, W.D. & Koschate, N., 2005, 'Customers ' Reactions to Price Increases : Do Customer Satisfaction and Perceived Motive Fairness Matter?', *Journal of the Academy of Marketing Science*, 33(1), 36–49.
- Horse, T., 2019, *Normal distribution (Bell Curve): Difinition, word problems, Statistics How To*.
- Hull, L., 2002, *Foreign-owned banks: Implications for New Zealand's financial stability*.
- Hume, M. & Mort, G.S., 2010, 'The consequence of appraisal emotion, service quality, perceived value and customer satisfaction on repurchase intent in the performing arts', *Journal of Services Marketing*, 24(2), 170–182.
- IMF, 2014, *Cambodia: Entering a new phase of growth*, International Monetary Fund, Washington, D.C.
- Jen, W., Tu, R. & Lu, T., 2011, 'Managing passenger behavioral intention: An integrated framework for service quality, satisfaction, perceived value, and switching barriers', *Transportation*, 38(2), 321–342.
- Kang, A.S., Jayaraman, K., Soh, K.-L. & Wong, W.P., 2019, 'Convenience, flexible service, and commute impedance as the

- predictors of drivers' intention to switch and behavioral readiness to use public transport', *Transportation Research Part F*, 62, 505–519.
- Kang, B.-S., Cho, C.-H. & Baek, J.-D., 2007, 'The effects of service quality on customer satisfaction in case of dissatisfied customers', *Asian Journal on Quality*, 8(1), 27–39.
- Kaura, V., 2013, 'Antecedents of customer satisfaction: A study of Indian public and private sector banks', *International Journal of Bank Marketing*, 31(3), 167–186.
- Kaura, V., Prasad, C.S.D. & Sharma, S., 2015, 'Service quality, service convenience, price and fairness, customer loyalty, and the mediating role of customer satisfaction', *International Journal of Bank Marketing*, 33(4), 404–422.
- Keaveney, S.M., 1995, 'Customer Switching Behavior in Service Industries: An Exploratory Study', *Journal of Marketing*, 59(2), 71–82.
- Keaveney, S.M. & Parthasarathy, M., 2001, Customer Switching Behavior in Online Services: An Exploratory Study of the Role of Selected Attitudinal, Behavioral, and Demographic Factors, *Journal of the Academy of Marketing Science*, 29(4), 374–390.
- Khalil, A.A. & Abed, M.A., 2014, 'Perceived Social Support is a Partial Mediator of the Relationship Between Depressive Symptoms and Quality of Life in Patients Receiving Hemodialysis', *Archives of Psychiatric Nursing*, 28(2), 114–118.
- Khan, N.U.R., Ghouri, A.M., Siddiqui, U.A., Shaikh, A., Shaikh, A. & Alam, I., 2010, 'Determinants analysis of customer switching behavior in private banking sector of Pakistan', *Journal of Contemporary Research in Business*, 2(7), 96–110.
- Khare, A., Mishra, A. & Singh, A.B., 2012, 'Indian customers' attitude towards trust and convenience dimensions of internet banking', *International Journal of Services and Operations Management*, 11(1), 107–122.
- Kotler, P. & Keller, K.L., 2016, 'Defining Marketing for the New Realities', *Marketing Management*, 15th edn., pp. 25–54, Pearson Education Limited.
- Kotler, P., Wong, V., Saunders, J. & Armstrong, G., 2005, 'Relationship Marketing', in P.E. Limited (ed.), *Principles of Marketing*, 4th edn., pp. 459–488, Prentice Hall Europe, Harlow.
- Lehto, X.Y., Park, O.J. & Gordon, S.E., 2015, 'Migrating to new hotels: A comparison of antecedents of business and leisure travelers' hotel switching intentions', *Journal of Quality Assurance in Hospitality and Tourism*, 16(3), 235–258.
- Liang, L.J., Choi, H.C. & Joppe, M., 2018, 'Exploring the relationship between satisfaction, trust and switching intention, repurchase intention in the context of Airbnb', *International Journal of Hospitality Management*, 69, 41–48.
- Liu, C.H., 2015, 'The impact on switching intention of E-trading systems for the securities industry', *Global Journal of Business Research*, 9(1), 75–88.
- Liu, F., Zhao, X., Chau, P.Y.K. & Tang, Q., 2015, 'Roles of perceived value and individual differences in the acceptance of mobile coupon applications', *Internet Research*, 25(3), 471–495.
- Mahmoud, M.A., Hinson, R.E. & Adika, M.K., 2018, 'The Effect of Trust, Commitment, and Conflict Handling on Customer Retention: The Mediating Role of Customer Satisfaction', *Journal of Relationship Marketing*, 0(0), 1–20.
- Maiyaki, A.A. & Mokhtar, S.S., 2011, 'Determinants of customer behavioural intention in Nigerian retail banks', *Interdisciplinary Journal of Research in Business*, 1(10), 42–48.
- Malhotra, A. & Malhotra, C.K., 2013, 'Exploring switching behavior of US mobile service customers', *Journal of Services Marketing*, 27(1), 13–24.
- Mayr, T. & Zins, A.H., 2012, 'Extensions on the conceptualization of customer perceived value: Insights from the airline industry', *International Journal of Culture, Tourism, and Hospitality Research*, 6(4), 356–376.
- Mosavi, S.M., Sangari, M.S. & Keramati, A., 2018, 'An integrative framework for customer switching behavior', *Service Industries Journal*, 38(15–16), 1067–1094.
- Mpinganjira, M., 2015, 'Online Store Service Convenience, Customer Satisfaction and Behavioural Intentions: A Focus on Utilitarian Oriented Shoppers', *Journal of Economics and Behavioral Studies*, 7(1), 36–49.

- Narteh, B., 2013, 'Key determinant factors for retail bank switching in Ghana', *International Journal of Emerging Markets*, 8(4), 409–427.
- National Bank of Cambodia, 2019, Annual Report.
- Nikbin, D., Ismail, I., Marimuthu, M. & Armesh, H., 2012, 'Perceived justice in service recovery and switching intention: Evidence from Malaysian mobile telecommunication industry', *Management Research Review*, 35(3–4), 309–325.
- Pham, Q.T., Tran, X.P., Misra, S., Maskeliunas, R. & Damasevicius, R., 2018, 'Relationship between convenience, perceived value, and repurchase intention in online shopping in Vietnam', *Sustainability (Switzerland)*, 10(1), 01–14.
- Phan, K.N. & Ghantous, N., 2013, 'Managing brand associations to drive customers' trust and loyalty in Vietnamese banking', *International Journal of Bank Marketing*, 31(6), 456–480.
- Pick, D., 2014, "Switching is easy"—Service firm communications to encourage customer switching', *Journal of Retailing and Consumer Services*, 21(4), 502–509.
- Ranaweera, C. & Prabhu, J., 2003, 'The influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting', *International Journal of Service Industry Management*, 14(4), 374–395.
- Reimers, V. & Chao, F., 2014, 'The role of convenience in a recreational shopping trip', *European Journal of Marketing*, 48(11/12), 2213–2236.
- Roy, S.K., Lassar, W.M. & Shekhar, V., 2016, 'Convenience and satisfaction: Mediation of fairness and quality', *The Service Industries Journal*, 36(5–6), 239–260.
- Setyono, L., Kusumawati, A., Mawardi, M.K., Kunci, K., Marketing, I., Perusahaan, C., Nasabah, K. & Nasabah, L., 2015, 'the effect of islamic marketing and corporate image on customer satisfaction and customer loyalty (Study on Customers of PT Bank Muamalat Indonesia Malang Branch Office)', *Jurnal Administrasi Bisnis*, 27(1).
- Sombultawee, K., 2017, 'Mobile Commerce Switching Intentions in Thai Consumers', *Mediterranean Journal of Social Sciences*, 8(6), 123–134.
- Stage, F.K., Carter, H.C. & Nora, A., 2004, 'Path analysis: An introduction and analysis of a decade of research', *The Journal of Educational Research*, 98(1), 05–13.
- Streiner, D.L., 2005, 'Finding our way: An introduction to path analysis', *Canadian Journal of Psychiatry*, 50(2), 115–122.
- Voss, G.B., Parasuraman, A. & Grewal, D., 1998, 'The Roles of Price, Performance, and Expectations in Determining Satisfaction in Service Exchanges', *Journal of Marketing*, 62(4), 46–61.
- Wirtz, J., Xiao, P., Chiang, J. & Malhotra, N., 2014, 'Contrasting the drivers of switching intent and switching behavior in contractual service settings', *Journal of Retailing*, 90(4), 463–480.
- World Bank Group, 2020, Economy Profile Cambodia: Doing Business.
- Wu, H.C. & Ai, C.H., 2016, 'A study of festival switching intentions, festival satisfaction, festival image, festival affective impacts, and festival quality', *Tourism and Hospitality Research*, 16(4), 359–384.
- Wu, H.C., Cheng, C.C. & Ai, C.H., 2017, 'An empirical analysis of green switching intentions in the airline industry', *Journal of Environmental Planning and Management*, 61(8), 1438–1468.
- Wungwanitchakorn, A., 2002, 'Adoption intention of banks' customers on internet banking service', *ABAC Journal*, 22(3), 63–80.
- Zakiy, M., 2019, The moderating effect of switching cost on the influence of price and service quality towards switching intention, Third international Conference on Sustainable Innovation-Humanity, Education and Social Sciences, vol. 353, 161–167.
- Zameer, H., 2010, Impact of Service Quality, Corporate Image and Customer Satisfaction Towards Customers Perceived Value In Banking Sector In Pakistan, (07), 1–5.
- Zehir, C., Schitoglu, Y., Narcikara, E. & Zehir, S., 2014, 'E-S-Quality, Perceived Value and Loyalty Intentions Relationships in Internet Retailers', *Procedia - Social and Behavioral Sciences*, 150, 1071–1079.

- Zhang, C., Liu, Y., Lu, W. & Xiao, G., 2019, 'Evaluating passenger satisfaction index based on PLS-SEM model: Evidence from Chinese public transport service', *Transportation Research Part A: Policy and Practice*, 120, 149–164.
- Zietsman, M.L., Mostert, P. & Svensson, G., 2019, 'Perceived price and service quality as mediators between price fairness and perceived value in business banking relationships: A micro-enterprise perspective', *International Journal of Bank Marketing*, 37(1), 2–19.
- Zikmund, W.G., Babin, B.J., Carr, J.C. & Griffin, M., 2013, 'Sampling Designs and Sampling Procedures', *Business Research Methods*, 9th edn., pp. 384–408, South-Western Cengage Learning.

Changes in Retail Consumer Behaviour in South Africa during COVID-19: Permanent or Temporary

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ABSTRACT

The lockdown phases of the COVID-19 pandemic, with little or no mobility and only digital connection, has led to an understanding that sudden and universal policies of psycho-social intervention has transformed the dynamics of consumer behaviour and redefined social, economic, and individual orientations. The aim of this paper is to determine whether the transformation in consumer behaviour is for the long or short term. Our strategic approach was to review insights from research organisations and scholars that explain the volatility of the times and the shifts in consumer behaviour. The research organisations conducted empirical research globally and in South Africa, with regards to consumer sentiments in the pandemic. This paper recognised notable shifts in consumer behaviour such as a shift to value and essentials. The pandemic, economy and technology are drivers of the change. The rise of knowledgeable consumers has exposed retailers to improvisation, balancing demand and supply and leading to further digitisation of buying. The conclusion is that as time progresses consumers will move beyond survival, the use of e-commerce for shopping will increase as several digital platforms emerge and retailers will be more resilient to manage global crisis. The implication of the shift on management and retailers compelled us to recommend resilience and remodification of the business models used by retailers.

Keywords: Consumer sentiments, consumer behaviour, improvisation, technology, Coronavirus

INTRODUCTION

It has been more than a year already, and cases of the Coronavirus (COVID-19) have unequivocally increased in different parts of the world. The uncertainty of the COVID-19 pandemic looms globally; its impact is felt differently across many geographic zones. For this reason, consumers' response to the crisis and adaptation to the new normal differs (Murashkin & Tyrvalinen, 2020:7-9). Consumers' sentiment and behaviours across different countries are diverging (McKinsey, 2020). The psycho-social conventions of the COVID-19, i.e., lockdown, social distancing, wearing of masks and so on, have disrupted the consumer habits of shopping and buying. Consumers are now financially affected with a new twist and have considerations for healthcare, personal health, and wellness (Sheth, 2020:280). Consumers have learnt to improvise as new habits emerge. All these are primal to a new motivation for long-term behavioural change of consumers or the suggestion of a new segment of individuals who migrated to a new value of save to stockpile (Vijayan, 2021:1-2).

The study refers to surveys conducted by McKinsey (2020) across forty-five countries to understand the impact of COVID-19 on consumer sentiment and behaviours. It was documented that there is adjustment in the way consumers respond to the crisis and adapt to the new trend. While the COVID-19 pandemic persists globally, the impact is felt

differently in many countries. Therefore, the reflection of consumer behaviour to the COVID-19 crisis is uncertain from the economic point of view (McKinsey, 2020).

In South Africa, the survey conducted by McKinsey (2020) revealed that despite the ease in national restriction levels, consumers have mixed feelings and are uncertain about the economic recovery and outlook of the country. The financial impact of the pandemic has left consumers in diminution of income, spending and savings. Consumer preferences are not on discretionary spending. However, Arora, Charm, Grimmelt, Ortega, Robinson, Sexauer and Yamakawa (2020:4) are of the view that South Africans have adopted an aggressive saving habit. Many consumers have tried new shopping behaviour and they intend to continue even beyond the COVID-19 crisis (Arora et al 2020:4).

In South Africa, more consumers are concerned about the economic recovery of the country (Accenture, 2020). The Government Paper on the Economic Reconstruction and Recovery Plan in South Africa (South African Economic Reconstruction and Recovery Plan, 2020) attested to the fact that the outbreak of COVID-19 found a vulnerable economy in South Africa that has passed through two consecutive sessions of recession. More so, the pandemic only deepened the economic crisis and the impact in the retail sector is a fallout of the obvious. One such impact is the shift in consumer behaviour. Meanwhile, the question here is whether the shift in consumer behaviour is temporary or will subsist after the COVID-19 pandemic. Knowledge of the length of time will assist both the formal and informal retailers to know what strategy to formulate or adopt at what time. Therefore, the purpose of this study is to determine through the examination of the results of various research organisations whether the shifts in consumer behaviour are permanent or transient in the South African retail sector.

LITERATURE

Consumer behaviour is the study of individuals and organisations and how they select and utilise products and services (Walters, 1974:2). Consumer behaviour identifies continuous actions that involve the decision-making process of searching, purchasing, using, evaluating, and disposing of products and services (Valaskova & Klietnik, 2015:292). Three distinct approaches have been documented about consumer behaviour, namely psyche, sociological and economic approaches (Bray, 2008: 3). The psychical approach is based on the association between the psyche and behaviour of the consumer (Bray, 2008:4). Sociological approach is concerned with the reactions of consumers to diverse situations (Hoyer & Stokburger-Sauer, 2012). Economic approach is that which deals with the basic knowledge of micro-economy where consumers define their requirements (Mehta, Saxena & Purohit, 2020:291).

Engel, Kollat, and Blackwell, (1978:4) (EKB) model, had described consumer behaviour as the interrelationships between the stages in the decision process of external and internal variables, it clarifies the relationships between behaviour and attitudes and define variables with greater and functional relationships for empirical testings. Furthermore, the (EKB) model is affected by three broad factors namely: individual differences, environment, and psychological processes. The individual differences are consumer resources, knowledge, attitudes, motivation, personality, values, and lifestyle. The (EKB) model acknowledges time as the most important resource of the consumer (Engel, Kollat, & Blackwell, 1995:147). Therefore, the (EKB) is a tool for solving the problems that are time oriented and relates to consumer resources.

In the globalised world, consumer behaviour has been explained through the liberal pattern of defeating individual identity and embracing collective identity through brand culture (Szmigin & Piacentini, 2018:42-43). In South Africa, it is described as the mental and emotional processes and physical activities of people who engage in buying of products and services (Smidt & Maigurira, 2020). Consumer sentiment is an economic indicator that measures how optimistic consumers feel about their finances and the state of the economy. It measures the value of consumer confidence against the economy of the state. It considers the overall health of the economy through the opinion and feelings of the consumers (Sihvonen, 2019). Consumer behaviour scholars explained that people are heterogeneous (not the same) and not all people have the same perception about situations with unfavourable effect like economic recession or pandemic (Amalia, Mihaela & Ionut, 2012:874). It was documented that the effect of recession on consumer attitudes and trends is critical. Some trends are advanced by recession or crisis and others are slowed and totally controlled (Flatters & Willmott, 2009:106). Restrictions in movement or gathering of consumers for shopping

has necessitated what is now referred to as adjustment in consumer behaviour. Despite the ease in the government policy on restriction levels in South Africa, consumers are unsure economically about what the outcome of the crisis will be. However, specific shifts have been noted in consumer behaviour and these shifts have affected consumers socially and may be present for a long time due to the pandemic. Therefore, managing the social/situational effect of the pandemic on consumer behaviour is imperative in this discussion.

Impact of COVID-19 on Consumer Behaviour

All consumer behaviour is influenced by time dependence and strong location (Sheth, 2020:2). More of the consumers engage in work activities between the hours of 8am and 5pm Mondays to Fridays, resulting in reduction of discretionary time. Furthermore, there is time shortage and time shift in both family and personal consumption time. Therefore, consumer habits are developed over time, what, where and when to consume (Sheth, 2020:5).

To reduce the effect of the pandemic on people in different locations, the government of South Africa introduced psycho-social measures such as lockdown, social distancing, wearing masks, sanitising of hands and so on. The containment of the pandemic has resulted in restrictions in movement, working, schooling, and shopping. Individuals now scramble for space at home to work, maintain privacy and convenience. Simultaneously, people have flexible time to work, attend school and shop. The result of the restriction is location constraints and shortage. Therefore, all consumption is time and location based (Abe, 2020).

Consumer behaviour over the years has become predictable because of the repetitive buying pattern of consumers, predictive models developed by scholars in the field of consumer behaviour and the development of consumer insights due to individual different levels of consumption (Krumme, Llorente, Cebrian, & Moro, 2013:2). Consumer behaviour is reflective of the relationship the individual retains in the form of habits. According to Sheth (2020), consumer behaviour is not only habitual but also contextual. Sheth identified four contexts that govern or disrupt consumer habits.

First is the social transformation context, which includes social changes by life events such as marriage, childbearing, geographic relocation, workplace, community, neighbourhood and so on. Second is the technological context - as new technologies emerge, old habits give way to new ones. Third is the consumption context which includes consumption of healthy and unhealthy products like alcohol, tobacco and firearms which are regulated consumption by location. Fourth is the less predictable context, including ad hoc events, natural disasters like earthquakes, hurricanes, and pandemics. All the backgrounds described are capable of disrupting consumer behaviour in the long run (Mehta, Saxena, & Purchit, 2020). Therefore, they drive the change in the consumption habits of consumers.

Sheth (2020) further documented eight factors that affect consumer behaviour amid COVID-19 as stated below:

Hoarding - alludes to consumers' excessive stocking of essential daily consumption products thereby resulting into temporary shortages and stock-outs. This was rampant with the health care products called personal protective equipment (PPE) for health care workers and supply chain of agri-food globally (Weersink, Von Massow, Bannon, Ifft, Maples, McEwan, McKendree, Nicholson, Novakovic, Rangarajan & Richards, 2021:1).

Improvisation - caused by scarcity of consumers' choice and the need to adopt another product to sustain a present consumption habit. Weddings and funeral services had to be conducted virtually instead of the traditional face-to-face interaction (Degli-Esposti, Mortara & Roberti, 2021:2).

Purchase Suspension Demand - where consumers' preferences during the pandemic demanded that certain products and services be held in abeyance until a convenient time in the future. Consumer goods affected here are automobiles, homes, and appliances. The discretionary services are concerts, sports, restaurants, and holidays (Ozili & Arun, 2020:1-5).

Digital technology - the restrictions on consumption forced consumers to adopt new technologies and their applications, for example social media like Facebook, WhatsApp, LinkedIn, YouTube, etc (Baig, Hall, Jenkins, Lamarre & McCarthy, 2020:4). The effect of technology and social media in general on consumer behaviour is massive.

Reverse Purchase - Due to the total lockdown globally in some countries like China, India, Italy and so on, instead of consumers going to stores, the stores came home to the consumer. This has broken the habits of physical representation in a brick-and-mortar store (Alanezi, Aljahdali, Alyousef, Alrashed, Mushcab, AlThani, Alghamedy, Alotaibi, Saadah & Alanzi, 2020:119).

Blurring of boundaries between work and home - Consumers are constrained to work at home as prisoners with limited space and diverse discrete activities (Sheth, 2020:8). Re-uniting with friends and families - Many have used the occasion of the pandemic to bridge gaps between friends and families. Many friends and families had to contact each other to assure one another of their state of health during the pandemic (Sheth, 2020:9).

Talent discovery - Having flexible time at home led consumers to discover talents in cooking, dressing and development of creative abilities (Sheth, 2020:10). All these factors contribute to the affect on the consumption pattern of consumers. Therefore, retail businesses that anticipate the changes in consumption patterns and act appropriately and timely are likely to reap the benefits.

Shifts in Consumer Behaviour

McKinsey (2016), in a pre-COVID-19 survey conducted to understand consumers' feelings about their financial prospects and the influence of sentiments on their buying behaviour, revealed a set of shifts among consumers in South Africa. South African consumer shift is a microcosm of the global interplay. Regarding shifts in the South African consumer sentiment, a reduction in consumer spending to save money and increase in the preference of favourite brands were observed (Coibon, Gorodnichenko, & Weber, 2020:2). Furthermore, it was reported that consumers traded down, i.e., bought cheaper brands or privately labelled products over their preferred brands (Knowles, Ettenson, Llynch & Dollen, 2020:2). However, consumers shifted toward modern retailers and away from independent or informal retailers (Aday & Aday, 2020:167). The implications of the shifts above were that the perception of value for money was a major influence on the South African consumer and that consumers seeking to save money were given the opportunity of free choice of their products or stores over alternatives.

Also, investments in revenue-growth management (RGM) which is the use of data and analysis to answer critical questions that channels pose to retail companies is altered. More so, channel strategies need be thought through especially where the informal retailers are involved. Due to the selective consumer trade-downs and trade-ups, retail companies were advised to develop a low-priced offering for down traders and a premium offering for high trade-up consumers. Therefore, retailers were to deliver exactly what the consumers want (Sheth, 2020:6).

McKinsey (2020) observed the following shift in consumer sentiment in the South African retail sector namely: That there has been a considerable shift to value and essentials, that is, consumers do more discretionary spending. Also, there has been a migration to digital and omnichannel, meaning that consumers have opted to spend online, which may continue even after the COVID-19 pandemic. Meanwhile, most consumers have changed stores, brands and shopping patterns which speaks to a movement from perceived loyalty. Many consumers are not willing to resume normal life as it were; rather they are willing to work from home. The last shift is that consumers want to go on holiday, but at reduced cost and spending (Arora, Charm, Grimmelt, Ortega, Robinson, Sexauer & Yamakawa, 2020:16).

Accenture (2020), in a survey conducted in the United States of America on the first three trends above, revealed that huge corporate liquidity and revenue streams will shift across the sector, creating losses for many retailers but opportunities for those who best anticipate the impacts of the changes in consumer behaviour.

In a report KPMG (2020a) expressed that because of the pandemic consumers demonstrate elastic economic behaviour when it comes to spending as shown in previous epidemics where consumers' attention was on price, origin of the products and utility-based consumption. Just as in previous outbreaks like SARS, MERS and other natural disasters, consumers displayed elastic economic behaviour by way of steady, slow, or rapid recovery of market. The implication of this behaviour is that a part of it is permanent and changes structurally the way we work, live, and make buying decisions (Mehta, et al 2020:229).

The Accenture consumer research (2020) reported that due to the COVID-19 pandemic, a rise in the concern of consumers has led to change in consumer priorities which now centre on the most basic needs like hygiene and staple products, while non-essential products like clothing decline. A Boston Consulting Group report (2020) revealed that there was a substantial decrease in sales in different sectors, apart from change in spending patterns. Therefore, product support, patronage, and desire to shop by consumers depend on what the consumer considers to be sustainable options.

Expected Temporary or Permanent Changes

In comparison to consumers elsewhere in the world, South African consumers have been viewed as pessimistic in relation to emerging markets. A survey conducted in South Africa by McKinsey (2020) revealed that 20% of consumers are optimistic that the economy will rebound within two to three months and grow stronger than pre-COVID-19, however 51% of consumers are uncertain of the length of time that the economy will be affected by COVID-19. Growth can only be forecasted after 6 to 12 months. Within the next year (2022), consumers in South Africa will continue to witness reductions in revenue, expenditure, and savings. On digital and omnichannel, the expectation is that consumers will significantly increase patronage across categories during and after the COVID-19 pandemic. The trade-down behaviour of consumers has grown across all socio-economic classes and it is expected to reduce over considerable time.

Mehta et al. (2020) noted that as time progresses consumers will move beyond the mode of survival. Some of the shifts in spending behaviour earlier mentioned will not be retained however some may be permanent, as the research organisations have reported. The shifts from values to essentials and consumer change of brands may be temporary. While migration of consumers to digital and omnichannel and desire to go on holiday may be permanent. The expectation is that there will be greater use of e-commerce for shopping as different digital platforms emerge as touch points. For example, social media, mobile platforms, and official sites of products have been engaged by consumers during COVID-19 as they have turned to the digitisation in buying. The digitisation in consumer buying is expected to increase. Technology platforms are deemed to play a strong role in creating awareness, retention of consumers and reaching consumers after COVID-19 (Deloitte, 2020). This reflects in the form of Apps that attract the attention of consumers in relation to entertainment, healthcare, news, education, and awareness (Accenture, 2020).

On sustainability of consumer habits, Sheth (2020:280-283) offers an interesting account of the subject from the habitual point of view. It is difficult for old habits to die, though some habits will be inevitably subsumed by the lockdown conditions, provided alternatives that are more convenient for the consumers are discovered. Consumers pick up new habits or modify old ones. Old habits are modified through compliance with regulations and guidelines such as wearing of masks, keeping social distance, maintaining health regulations when shopping and so on. New habits generated are subject to three conditions, namely public policy, technology and changing demographics (Sheth & Sisodia, 1999:1). At the convenience of families, collective consumption has given way to individual consumption.

Implications of the COVID-19 Impact on Consumer Behaviour

It is important to consider the managerial, retail and research repercussions of the pandemic on consumer behaviour. These implications are strategic pointers to the future of consumer behaviour.

Implications on Management

From the management perspective, insights to be considered are that both consumers and businesses have learnt to cobble together (improvise) due to the pandemic. More of the large retailers like Walmart and Target are transitioning to cloud computing and this is facilitating the improvisation (Sheth, 2020). The physical stores are being

converged with online shopping and increasing capacity for omnichannel delivery. Retail businesses have learnt to make their infrastructures, processes, and systems more resilient to manage global crises such as COVID-19. Despite the strategy of improvisation consumer attitude may change as time passes, this implies that management must be ready to cope with the difficulties of online shopping e.g., difficulties associated with time factor, risks in online shopping etc.

Another issue that the management need to consider is the balancing of demand and supply. From supermarkets to hyper stores, retailers had serious shortages in supply chain, logistics and warehousing operations during the pandemic due to hoarding mentality of consumers. This implies that the management must avoid overstocking and understocking by way of understanding consumer demand, invest in consumer demand/supply planners, analyse target stock level, and optimize order and replenishment frequency (Eksoz, 2020). It is expedient to increasingly encourage online procurement as opposed to keeping merchandise waiting at the store for consumers. It is important for retail businesses to find ways to constantly improve on online experiences for consumers. Therefore, instead of the consumer going to the store, the store goes to the consumer at relatively the same price.

Consumers are likely to return to old habits if the technology they learn to use fails to offer significant changes in their lives. Strategic view of businesses will be on customers' experience and post-purchase services or support. The implication of the insights above is that retailers who adopted these strategies are making profit despite the disruptions by the pandemic, and the laggards are struggling.

Implications on Retailers

The rise of knowledgeable consumers along with the proliferation of products and niche markets mount pressure on traditional retailing. The retail efforts that go into the functions of inspiring, informing, and supplying are now heightened. An Ipsos (2013) survey gave preference to the internet as the primary source of information on new products and brand discovery for millennials (those aged between 18 and 34). Then it was predicted that millennials are more likely to trust in corporate responsibility than to put their trust in brands.

Today, these millennials drive and dictate consumer sentiments. Instagram is used by younger consumers to share daily clothing trends with others, collecting likes and inspiring each other. Brand messages are being changed through reviews, research and cocreation among technology-oriented consumers. It is expedient that the retailers should find out the platforms these millennials spend their time. Know what the consumers are doing on each platform. Be informed about the social platforms they prefer. Consumers who are connected to these resources and communities are actively involved. Consumer sentiment in the COVID-19 suggested that the crisis serves as reset opportunity for retailers in the footwear, clothing, and luxury sectors to strengthen their commitment to sustainability (Granskog, Lee, Magnus & Sawers, 2020). This implies that retailers must direct strategic efforts towards the millennial and technologically engage in innovative ideas of winning their buying decisions.

Before now traditional retailing business was conducted on a face-to-face basis only, consumers had access to goods displayed in the shops. Because of conventions introduced by governments globally to contain the spread of the COVID-19 pandemic, consumers are relying on online orders and deliveries for their purchases. Retailers who rely on high fixed cost structures, which compete by using inventories at hand, are increasingly losing out to competitors with lower fixed cost structures and extensive product assortment (Sheth, 2020). The discount retail business model that was designed by Porter (1985:168) has become obsolete. Business models that are rooted and designed to feed brick and mortar retailing have fallen short of strategies (Brea-Solis, Casadesus-Masanell & Grifell- Tatje, 2015: 13). Sorescu, Frambach, Singh, Rangaswamy and Bridges (2011:4) suggested a remodification of business models in retailing. The shift in consumer behaviour calls for new business models that will accommodate the present retail transformation. For example, Amazon operates at 15% price mark-up, compared to an average retail mark-up of 65% to 80% for appeal-centric retailers (Amazon, 2021).

Implications on Research

Lockdown, social distancing and wearing of masks have disrupted the pattern of consumer behaviour. The disruption gave room for new research to spring up ranging from problem recognition to search for information on shopping to delivery and waste disposal. Empirical research is being generated with some theoretical propositions on hoarding, blurring the work-life boundaries and the use of social media in a crisis. All these aims to enrich the discipline of consumer behaviour.

There is therefore an imperative need for academic research studies that focus on consumer resilience and improvisation, for example cultural differences exist in improvisation across the globe (Hallam & Ingold, 2021:5). There is the need for insight into the different techniques utilised by consumers globally to isolate themselves from the COVID-19 infection.

The use of social media has increased through Facebook, Instagram, WhatsApp, Twitter and Zoom (Chauhan, & Shah, 2020). The quantity of data being generated in word communication is enormous. The current analysis of video conversations is not useful, therefore, there is the huge need to develop different techniques of analysing video conversations.

CONCLUSION

The application of psycho-social convention policies of COVID-19 has led to significant disruptions to consumer sentiments and behaviour. All consumptions are influenced by strong aspects of geographic location and time-dependence. With flexible time but fixed locations consumers have learnt to creatively improvise. Whether the change in consumer behaviour will last or not depends on the national recovery rate of the economy. The view of research organisations is that the use of e-commerce will increase for shopping (digitisation in buying). Consumers that are not satisfied with their present choice will go back to their old habits. Retailers must position themselves to respond promptly and adequately to the needs of consumers. Technology is a major driver of the transformation in consumer behaviour, therefore, that which is artificial has become real to us.

REFERENCES

- Abe, S. 2020. Market trends and D2C opportunities in the COVID-19 landscape. The AdRoll Blog. Available from: <https://www.adroll.com/blog/marketing/market-trends-and-d2c-opportunities-in-the-covid-19-landscape>. [Accessed 12 March 2021].
- Accenture. 2020. Covid-19 new habits are here to stay for retail consumers. Available from: <https://www.accenture.com/hu-en/insights/retail/coronavirus-consumer-habits>. [Accessed 13 April 2021].
- Aday, S. and Aday, M.S. 2020. Impact of COVID-19 on the food supply chain. Food Quality and Safety, 4(4), pp.167-80.
- Alanezi, F., Aljahdali, A., Alyousef, S.M., Alrashed, H., Mushcab, H., AlThani, B., Alghamedy, F., Alotaibi, H., Saadah, A. and Alanzi, T. 2020. A Comparative Study on the Strategies Adopted by the United Kingdom, India, China, Italy, and Saudi Arabia to Contain the Spread of the COVID-19 Pandemic. Journal of healthcare leadership, 12, p.117.
- Amalia, P., Mihaela, D. and Ionut, P. 2012. From market orientation to the community orientation for an open public administration: A conceptual framework. Procedia-Social and Behavioral Sciences, 62, pp.871-75.
- Amazon Services Seller Forum. 2021. Markup selling on Amazon. <https://sellercentral.amazon.com/forums/t/markup/320701>.
- Arora, N., Charm, T., Grimmelt, A., Ortega, M., Robinson, K., Sexauer, C. and Yamakawa, N. 2020. A global view of how consumer behavior is changing amid COVID-19. McKinsey. April.1-19
- Baig, A., Hall, B., Jenkins, P., Lamarre, E. and McCarthy, B. 2020. The COVID-19 recovery will be digital: A plan for the first 90 days. McKinsey Digital, 1-8.
- Boston Consulting Group Report. 2020. The New Reality of Consumer Behaviors That Will Define Telco Services in the Kingdom of Saudi Arabia. Available from: <https://www.bcg.com/en-mideast/press/12aug2020-consumer-behaviors-telco-services>. [Accessed 13 April 2021].

- Bray, J.P. 2008. Consumer behaviour theory: approaches and models. Bournemouth.ac.uk, pp.3-5.
- Brea-Solís, H., Casadesus-Masanell, R. and Grifell-Tatjé, E. 2015. Business Model Evaluation: Quantifying Walmart's Sources of Advantage. *Strategic Entrepreneurship Journal*, 9(1), pp.12-33.
- Coibion, O., Gorodnichenko, Y. and Weber, M. 2020. The cost of the Covid-19 crisis: Lockdowns, macroeconomic expectations, and consumer spending (No. w27141). National Bureau of Economic Research. Cambridge MA. 151. Is this set out right? Should it be pp.1-51
- Chauhan, V., and Shah, M. H., 2020. An empirical analysis into sentiments, media consumption habits, and consumer behaviour during the Coronavirus (COVID-19) outbreak. *Purakala with ISSN*, pp. 0971-2143.
- Degli-Esposti, P., Mortara, A. and Roberti, G. 2021. Sharing and Sustainable Consumption in the Era of COVID-19. *Sustainability*, 13(4), 1903.1-15.
- Deloitte. 2020. How COVID-19 has affected South African grocery retail consumer sentiment. Available from: <https://www2.deloitte.com/za/en/pages/consumer-industrial-products/articles/covid-19-consumer-sentiment-in-retail.html>. [Accessed 13 April 2021].
- Eksoz C. (2020) Balancing supply & demand: the 5 core steps. *Demand-planning .com/2020/03/03/balancing-supply-demand-the-5-core-steps/* accessed 25/07/21.
- Engel, J.F., Kollat, D.T., & Blackwell, R.D. 1978. *Consumer behaviour*, 3rd ed. Hindale, IL. Dryden.
- Engel, J.F., Kollat, D.T., & Blackwell, R.D. 1995. *Consumer behaviour* 8th ed. Harcourt Education Fort Worth Tx.
- Flatters, P. and Willmott, M. 2009. Understanding the post-recession consumer. *Harvard Business Review*, 87(7/8), pp.106-112.
- Granskog, A., Lee, L., Magnus, K.H., & Sawers, C., 2020 Survey: Consumer sentiment and sustainability in fashion. McKinsey & company.
- Hallam, E. and Ingold, T. (Eds.). 2021. Creativity and cultural improvisation. In *creativity and cultural improvisation introduction*. Routledge. 4-6.
- Hoyer, W.D. and Stokburger-Sauer, N.E. 2012. The role of aesthetic taste in consumer behavior. *Journal of the Academy of Marketing Science*, 40(1), pp.167-180.
- Ipsos. (2013). Brand and marketing. The millennials myths and realities. Available from: https://www.ipsos.com/sites/default/files/ct/news/documents/2018-03/millennials_facing_brands_and_marketing.pdf. [Accessed 12 April 2021].
- Knowles, J., Ettenson, R., Lynch, P. and Dollens, J. 2020. Growth opportunities for brands during the COVID-19 crisis. *MIT Sloan Management Review*, 61(4), pp.2-6.
- KPMG. 2020a. Changing consumer behaviors in a post COVID-19 world: Lessons learnt from China. Available from: <https://assets.kpmg/content/dam/kpmg/th/pdf/2020/06/Presentation-Changing-consumer-behaviors-in-a-post-COVID-19-world.pdf>. [Accessed 13 April 2021].
- Krumme, C., Llorente, A., Cebrian, M. and Moro, E., 2013. The predictability of consumer visitation patterns. *Scientific reports*, 3(1), pp.1-5.
- McKinsey. 2020. Global surveys of consumer sentiment during the COVID19 crisis. Available from: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-global-view-of-how-consumer-behavior-is-changing-amid-covid-19>. [Accessed 15 March 2021].
- McKinsey. 2020. Consumer sentiment and behavior continue to reflect uncertainty of the COVID-19 crisis. Available from: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-global-view-of-how-consumer-behavior-is-changing-amid-covid-19>. [Accessed 14 March 2021].
- Mehta, S., Saxena, T. and Purohit, N. 2020. The New Consumer Behaviour Paradigm amid COVID-19: Permanent or Transient? *Journal of Health Management*, 22(2), pp.291-301.
- Murashkin, M. and Tyrväinen, J. 2020. Adapting to The New Normal: A Qualitative Study of Digital Leadership in Crisis. (Masters Dissertation), 7-9.

- Ozili, P.K. and Arun, T. 2020. Spill over of COVID-19: impact on the Global Economy. Available from: SSRN 3562570. 1-28.
- Porter, M.E. and Advantage, C., 1985. Creating and sustaining superior performance. *Competitive Advantage*, 167, pp.167-206.
- Schutte, H. and Ciarlante, D. 2016. Consumer behaviour in Asia. Springer, pp.142-44.
- Sheth, J.N. 2020. Borderless media: Rethinking international marketing. *Journal of International Marketing*, 28(1), pp.3-12.
- Sheth, J. 2020. Impact of Covid-19 on consumer behavior: Will the old habits return or die? *Journal of Business Research*, 117, pp.280-83.
- Sheth, J.N. and Sisodia, R.S. 1999. Revisiting marketing's lawlike generalizations. *Journal of the Academy of Marketing Science*, 27(1), pp.71-87.
- Sihvonen, J. 2019. Understanding the drivers of consumer-brand identification. *Journal of Brand Management*, 26(5), pp.583-594.
- Smidt, F. and Maigurura, L. (2020). 7 new consumer shopping behaviour trends in South Africa. Available from: <https://www.thinkwithgoogle.com/intl/en-ssa/consumer-insights/consumer-trends/covid-effect-7-new-consumer-shopping-behaviour-trends-south-africa/>. [Accessed 15/07/2021].
- Sorescu, A., Frambach, R.T., Singh, J., Rangaswamy, A. and Bridges, C. 2011. Innovations in retail business models. *Journal of retailing*, 87, pp.S3-S16.
- South African Economic Reconstruction and Recovery Plan. (2020) Aimed at stimulating an equitable and inclusive growth. Available from: https://www.gov.za/sites/default/files/gcis_document/202010/south-african-economic-reconstruction-and-recovery-plan.pdf [Accessed 15/07/21].
- Szmigin, I. and Piacentini, M. 2018. Consumer behaviour. (2nd ed.). Oxford University Press, pp.42-83.
- Toubes, D.R., Araújo Vila, N. and Fraiz Brea, J.A. 2021. Changes in Consumption Patterns and Tourist Promotion after the COVID-19 Pandemic. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), pp.1332-52.
- Valášková, K. and Klieštík, T. 2015. Behavioural reactions of consumers to economic recession. *Business: Theory and Practice*, 16(3), pp.290-303.
- Vijayan, J. 2021. Consumer Behaviour: Impact of COVID-19. *International Journal of Science, Engineering and Management (IJSEM)*, 6(1), pp. 1-2.
- Walters, C. G. (1974). *Organizational behaviour: Human behaviour at work*. (9thed.). New Delhi: Tata McGraw Hill, pp 2.
- Weersink, A., von Massow, M., Bannon, N., Ifft, J., Maples, J., McEwan, K., McKendree, M.G., Nicholson, C., Novakovic, A., Rangarajan, A. and Richards, T. 2021. COVID-19 and the agri-food system in the United States and Canada. *Agricultural Systems*, 188, p.103039.

Determinants of mobile gaming need satisfaction in South Africa

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ABSTRACT

Mobile gaming is one of the fastest growing industries in the world and is playing a significant role in the entertainment industry, yet not much is known about the psychological drivers of mobile gaming need satisfaction. The purpose of this study was to explore how mobile gamers are inherently drawn to play games enthusiastically. Understanding the psychological game need satisfaction would be invaluable to game developers to develop mobile games that smartphone users will actually play. The study adopted a quantitative approach and descriptive research, using a non-probability convenience and snowball sampling technique. A self-administered questionnaire was distributed to 307 adult consumers who had downloaded a mobile game application at the time of the survey. The results of the Structural Equation Modelling (SEM) suggest that enjoyment is the most significant predictor of mobile gaming need satisfaction, followed by gaming facilitating conditions, while personal gratification and effort expectancy are insignificant factors. Mobile gaming developers can improve mobile gaming need satisfaction by developing mobile games that are satisfying and that enhance enjoyment through improved game features pertaining to novelty, design and competence. This study is one of the first in a developing economy to address the unexplored relationships between variables drawn from different theoretical frameworks within the context of mobile gaming, contributing to understanding mobile game need satisfaction through smartphones that are already well-integrated into users' lifestyles.

Keywords: Mobile games, gaming need satisfaction, enjoyment, effort expectancy, personal gratification, gaming capability, psychological drivers, South Africa

INTRODUCTION

The exponential adoption of smartphones has brought about a myriad of mobile enabled services, including mobile payments, mobile marketing, mobile commerce and mobile gaming, to mention but a few. Literature indicates that there is an increase in the number of apps that are downloaded every year across mobile operating systems. A recent study by Rutz, Aravindakshan and Rubel (2019) reported that 197 billion apps were downloaded in 2019 across mobile operating systems. It is certain that mobile app downloads will keep growing.

The exponential growth in smartphone gaming apps that seemingly have no age or gender boundary anymore is of particular interest to this study. While mobile gaming is currently a \$106 billion industry, it is forecasted to reach \$256 billion by 2025 (Mordor Intelligence, 2021). The growth of the gaming industry across the globe is partly due to increasing smartphone penetration and increased adoption of trending technologies for developing mobile games

(Mordor Intelligence, 2021). In Africa, consumers have an average of 33 apps downloaded per device at any point (Deloitte, 2017), and games account for the majority of app downloads (eMarketer, 2017). A total of 15.2 billion mobile phone games were downloaded from the Apple App Store and Google Play across the globe during the first quarter of 2020 (Clement, 2021). Yet, not much is known about what drives consumer satisfaction with mobile gaming apps, especially in emerging markets. It is clear that there is a strong correlation between the growth of mobile gaming and increased smartphone ownership (Harrop, 2020).

It is crucial to understand the psychological drivers of mobile gaming need satisfaction, particularly from an emerging market perspective, such as South Africa. South Africa is of particular interest for a number of reasons. First, South Africa is currently the second largest gaming market on the continent after Egypt (Morocco is in the third place) (Clement, 2021). Based on the report by Clement (2021), mobile gaming is expected to be a R5 billion industry by 2023. Second, a larger proportion of the population cannot afford a gaming personal computer or console, but the availability of cheap smartphones and tablets and easier internet access could strengthen this growth (PricewaterhouseCoopers, 2018). Third, due to increasing cases of positive COVID-19 cases, the country has been under lockdown to curb the spread of the virus, resulting in a significant growth in the consumption of mobile entertainment, including mobile games (Africa.com, 2021). Fourth, the access to high speed internet and increased 3G/4G coverage across the country could see the mobile gaming market rise. It would not be advisable for researchers to neglect market research in Southern Africa where 477 million people subscribed to mobile services in 2019; a number that is projected to reach 500 million in 2022 (Clement, 2021). Due to limited available research, the study contributes by focussing on smartphone gaming need satisfaction in South Africa where mobile games, including short videos and navigation, are the most popular content-related activities among consumers (Africa.com, 2021).

Despite an increase in literature on mobile gaming app adoption and utilisation, most available reports focus primarily on download decisions (Bulduklu, 2019; Nam & Kim, 2020; Bowman, Jöckel & Dogruel, 2015) rather than psychological game need satisfaction. These studies either investigated purchase intention of mobile game apps (Lu et al., 2016), predictions of mobile game success (Alomari, Ncube & Shaalanet, 2018), or the relationship between gaming on smartphone use and self-perceived problematic smartphone use (Lopez-Fernandez, Männikkö, Kääriäinen, Griffiths & Kuss, 2018). It is safe to assume that the development of mobile apps requires substantial investment by mobile game developers, yet success is not guaranteed (Zheng, 2020). There seems to be a paucity of studies investigating psychological drivers of mobile gaming need satisfaction from an emerging market perspective, a knowledge gap that this study attempts to address.

Although the success of a product or service depends on continued use (Yang & Lin, 2019), excessive gaming can be detrimental to the health of players as they can suffer from depression, anxiety and low self-control because playing mobile games is usually not straightforward (Lopez-Fernandez et al., 2018). Therefore, there is a need for further research into users' psychological gaming need motivations to enhance the game relevance and utility of the application features that in turn could lead to satisfaction (Alomari et al., 2018). Satisfaction is a crucial outcome in developing mobile games that are fun to play, thus ensuring user engagement in a highly competitive mobile phone game market (Yang & Lin, 2019). Also, according to Zheng (2020), only a third of downloaded apps remain active after download, making understanding the psychological need satisfaction a high priority for marketers in order to develop mobile games that capture wider audience interest. This underscores the need to develop mobile games that are satisfying, as mobile game apps are one of the most promising and profitable mobile entertainment services (Yang & Lin, 2019).

Mobile games can generally be described as gaming apps that are played on smartphones and tablets that have wireless communication functionality (Merikivi, Tuunainen & Nguyenet, 2017). Specifically, the study investigates the drivers of casual gaming need satisfaction. The casual game is the most popular genre and Candy Crush is the most widely played game (Molinillo, Japutra & Liébana-Cabanillas, 2020). According to Molinillo et al. (2020), casual games generally have uncomplicated game controls, are easy to learn, have shorter play sessions and have simple rules to progress within the game. Casual games can be downloaded and played anywhere any time and can be uninstalled from the device anytime without any cost (Nam & Kim, 2020). Lopez-Fernandez et al. (2018) also found that casual games were the favourite type of gaming on smartphones. Hence, it would be plausible to suggest that casual games

are also likely to be popular among South African players, not only because they appeal to a wider demographic but also because they could be a source of good entertainment during this depressing time of the COVID-19 pandemic. This assertion is congruent with Bowman et al.'s (2015) statement that the majority of smartphones games fit the casual game category since they do not require heavy investments in time and skill from the players.

RESEARCH OBJECTIVE

The primary objective of this paper is to further the understanding of drivers of need game satisfaction from an emerging market perspective. This objective could be realised through investigating the influence of the following factors on mobile gaming need satisfaction: Effort expectancy, facilitating conditions, personal gratification, and enjoyment. These factors are worthy of further investigation in the context of an emerging market since they have been tested and found to be significant predictors of game adoption in previous international studies (Choe & Schumacher, 2015; Kumar, Natarajan & Acharjya, 2017).

The following research question guided this study: Given the ubiquitous nature of mobile phones and the need to play games anywhere, what are the psychological drivers of mobile gaming need satisfaction among users? The answer to this question is important for game designers to develop mobile games that not only enhance the gaming experience but that are also marketable in the highly competitive industry.

The study contributes by proposing and testing a new framework that incorporates variables taken from the literature based on the following models: The updated unified theory of acceptance and use of technology (UTAUT2) (Venkatesh, Thong & Xu, 2012) and the game use experience satisfaction scale (GUESS) (Phan, Keebler & Chaparro, 2016). The UTAUT2 is an extension of the UTAUT, which was originally developed to test the acceptance of technology in the workplace, and has been updated to apply to new contexts such as collaborative technology and health information systems (Venkatesh et al., 2012). The GUESS framework was developed by Phan et al. (2016) following a rigorous system of scale development, modification, refinement, and validation to measure satisfaction with gaming experience.

The theoretical underpinning of the study is the basic psychological need theory (Peng, Lin, Pfeiffer & Winn, 2012), which has rarely been applied in the context of mobile gaming, and in particular, from an emerging economy perspective. It has been hypothesised in literature that psychological need satisfaction is a strong predictor of behavioural engagement in that satisfaction significantly provides the energy to continue with the behaviour (Sailer, Hense, Mayr & Mandl, 2017). Thus, the basic psychological need theory underpins this study to determine the extent to which mobile gamers will be satisfied with a gaming experience so that they will continue to play. The application of this theory is also important to determine the applicability of the model in a new setting such as South Africa, which has the highest mobile penetration rates in Africa (GSMA Intelligence, 2016), with a view to growing the South African mobile gaming app market.

LITERATURE REVIEW

Basic psychological need theory

The basic psychological theory is an extension of the broad self-determination theory predominantly used to understand human intrinsic and extrinsic motivation and to understand individual differences (Peng et al., 2012). Of the six mini theories of the self-determination theory, the basic psychological need theory proposes that humans yearn to satisfy the following three basic needs: The needs for competence (i.e. feeling effective and skilled), autonomy (i.e. making conscious decisions based on one's values and goals) and relatedness (i.e. feeling of self-connection to peers) (Mills & Allen, 2020). According to Peng et al. (2012), the underlying principles of the basic psychological need theory propose that satisfying the needs for autonomy, competence and relatedness results in better mood, vitality and self-esteem. Extant literature indicates that need satisfaction predicts psychological wellbeing (Mills & Allen, 2020; Sailer et al., 2017), suggesting that mobile game need satisfaction during an engagement is associated with increased gaming frequency, enhanced intention to replay and higher enjoyment. Thus, the psychological need

theory helps to explain how mobile game players are inherently drawn to play enthusiastically. Understanding the need to play mobile games would be invaluable to game developers to develop mobile games that smartphones users will actually play.

Mobile game need satisfaction

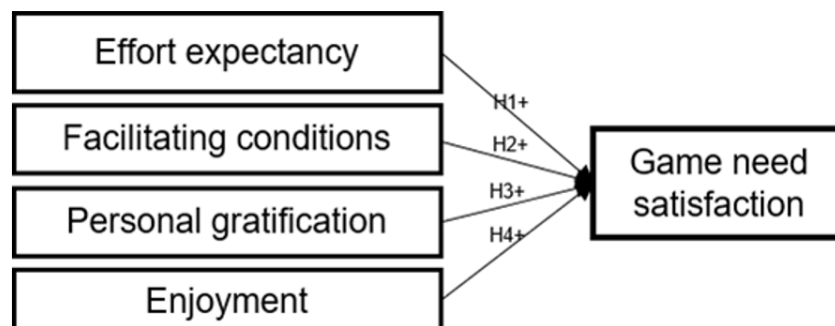
The topic customer satisfaction topic has attracted research interest from scholars for many years, driven in part by the notion that customer satisfaction has long term customer benefits such as loyalty and increased profitability (Huang, Hsu, Chen & Chanet, 2014; Mills & Allen, 2020). Mobile game players seek to satisfy their psychological needs during game play. In this study, satisfaction is described as an emotional reaction that is produced by the feeling that the consumer experiences during game play and the performance level of the mobile game. Previous researchers concurred that satisfaction judgements are made from both cognitive (knowing and perceiving) and affective (relating to moods and feelings) perspectives (Mills & Allen, 2020). Despite this concurrence, several studies have produced conflicting results, which prompted some scholars to suggest that satisfaction varies depending on the product and situation. Lin and Lekhawipat (2016) reported that perceived product performance and customer experience influence customer satisfaction. With reference to this study, it suggests that customer expectations of satisfaction may differ depending on the performance of the mobile gaming app.

Various studies investigated gaming need satisfaction with regard to the influence of game features (Peng et al., 2012) or gamification (Sailer et al., 2017). Traditionally, when factors that influence user satisfaction for new technologies or information systems are investigated, function-orientated designs are emphasised. However, the focus of this study is on the entertainment of the user. Consequently, it is important to focus on improving hedonic satisfaction, because that will sequentially increase satisfaction and actual continued use of a mobile gaming app (Choe & Schumacher, 2015).

DEVELOPMENT OF THE CONCEPTUAL FRAMEWORK AND HYPOTHESES

As alluded to earlier, the conceptual framework of this study uses factors from the GUESS and UTAUT2 theoretical frameworks. These factors, as illustrated in Figure 1, are worthy of further investigation in the context of mobile gaming to add to the existing body of literature on mobile gaming need satisfaction.

FIGURE 1
PSYCHOLOGICAL DRIVERS OF MOBILE GAMING NEED SATISFACTION



Effort expectancy

Effort expectancy is also described as ease of use in the technology acceptance model (Davis, 1989), and can be explained as the usability associated with the system (Venkatesh et al., 2012). In this study, effort expectancy reflects the degree of ease of downloading, installing and playing the mobile game. Hence, the goal of effort expectancy in

mobile gaming is to ensure that players can easily interact with the game to achieve satisfaction. When the effort expectancy goal is achieved, game players can focus on experiences within the game. If players struggle to play a game, they will lose interest in the game (Kimberly, Lim, Khong & Wong, 2016). Therefore, effort expectancy is integral for players to satisfy the need for competence and a sense of effectiveness, skill and game need satisfaction, which could lead to their comfort and a positive attitude toward the game (Kimberly et al., 2016). The hypothesis that effort expectancy is positively associated with user satisfaction has been tested in varied contexts such as online shopping experience (Taheri & Akbari, 2016) and mobile apps (Tam, Santos & Oliveira, 2018). Although Baabdullah (2018) postulated that the level of effort expectancy depends on the device used, this study hypothesised the following:

H₁: Effort expectancy is positively associated with smartphone gaming need satisfaction.

Facilitating conditions

Facilitating conditions can be defined as the degree to which an individual believes that organisational and technical support structures are set up to support them while using the system to overcome any usage barriers (Baabdullah, 2018). In this study, facilitating conditions translates to the available technical support when players get 'stuck' to enable them to continue playing the mobile game (Kumar et al., 2017). Baabdullah (2018) reported that facilitating condition is a fundamental requirement for users to be practically proficient in all the steps involved in browsing the internet and downloading and playing the game. The level of support could enable the player to make conscious decisions on which game to play and when to play it based on their goal at the time of playing the mobile game. Thus, creating an enabling environment for a better mobile gaming experience increases user satisfaction, and it can be assumed that facilitating conditions facilitate game need satisfaction. Thus, it is hypothesised that:

H₂: Facilitating conditions are positively associated with smartphone gaming need satisfaction.

Personal gratification

According to Phan et al. (2016), personal gratification can be described as the motivational and challenging aspects of a game that stimulate players to accomplish game goals and complete challenges, thus creating a desire to succeed and continue to play the game. A need for competence can be achieved when the mobile game offer points as feedback that is directly connected to the player's abilities. According to Sailer et al. (2017), some mobile games provide performance benchmarks or graphs to indicate progress over time, which could be a great source of motivation to continue playing. Individual players often value feelings of self-connection with peers, which underscores players' need to connect and join groups that socially connect with others (Merikivi et al., 2017). Personal gratification and a sense of social relatedness could be achieved when players and peers compare their accumulated game points that are awarded in playing a similar game. Based on the above, it is hypothesised that:

H₃: Personal gratification is positively associated with smartphone gaming need satisfaction.

Enjoyment

Enjoyment can be described as the extent of happiness and excitement players experience as a result of playing the game (Molinillo, Japutra & Liébana-Cabanillas, 2020). Molinillo et al. (2020) described enjoyment as perceived fun that comes from engaging in mobile games that are so absorbing as to provide an escape from the demands of busy daily life. Game enjoyment has been researched extensively from different angles, including playing tennis via an active video game (Wadsworth et al., 2014) and horror games (Lin, Wu & Tao, 2018). One of the main aims of mobile games is to satisfy players' need for pleasure and fun, competence, autonomy and relatedness (Merikivi et al., 2017). Most authors researching enjoyment during game play agree that players are unlikely to continue playing a game if it is not enjoyable or fun (Bulduklu, 2019; Rutz et al., 2019; Molinillo et al., 2020). According to these authors, game players do not only want to satisfy objective needs but also play to fulfil fantasies or develop a desired 'unreality'. Thus, it can be hypothesised that:

H₄: Enjoyment is positively associated with smartphone gaming need satisfaction.

METHODS

Sampling profile

As previously alluded to, mobile gaming transcends age groups. Hence, the target population consisted of Baby Boomers (born between 1946 and 1965), Generation X (born between 1966 and 1985), and Generation Y (born between 1986 and 2005) (Shams, Rehman, Samad & Oikarinen, 2020). These would be South African smartphone users who had downloaded a casual mobile gaming app on their mobile device in the six months before the survey was initiated during 2019.

The population was accessed through an online survey by distributing the link on specific Facebook pages, such as public profiles for businesses, brands and celebrities, that had granted permission to post the survey on their wall. The use of paid social advertising to boost the survey's visibility on third-party individuals' social media pages was also sought and granted.

The sample was drawn using a non-probability convenience sampling method supported by snowball sampling. The snowball sampling method was used as suggested by Parker, Scott and Geddes (2019) to provide referrals or nominate other potential participants who fit the research criteria. Thus, the qualified participants shared the invitation with acquaintances that fit the defined targeted population. Respondents who fully completed the survey qualified for entry into a lucky draw. Three respondents' names were drawn and each received a voucher valued at R500 from a popular South African online store. If the winners mentioned that a specific individual had referred them, the person who referred them received a R250 voucher from the same store. This assisted in effecting snowball sampling. A total sample of 307 respondents was obtained and yielded a margin of error of 5.55% with a 95% confidence level (Raosoft, 2014).

Measures

The questionnaire consisted of 25 statements measuring the psychological drivers that predict mobile gaming need satisfaction. The questionnaire was structured into three sections. Section A comprised screening questions to establish whether respondents were eligible to complete the survey with respect to smartphone ownership and having downloaded a casual mobile game app during the six months preceding the survey. Section B consisted of questions pertaining to device used and frequency of play. Section C comprised statements measuring psychological gaming need satisfaction. The last section, Section D, compiled demographic information with respect to gender, population group and age. Participants were asked to answer all questions regardless of whether they also played mobile games other than casual games.

The five items that measured effort expectancy and four items measuring facilitating conditions were taken from Baabdullah (2018). The six items measuring mobile gaming need satisfaction and personal gratification and the four items measuring enjoyment were taken from Phan et al. (2016). All scales had proven internal consistency reliabilities ranging between 0.77 and 0.88 Cronbach's alpha values; the average variance extracted [AVE] of the constructs ranged from 0.650 to 0.850; and the factor loading values were greater than 0.50. The adopted scales were also previously used in the context of mobile payments

All responses were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was pre-tested with 20 respondents randomly selected from the target population. Their feedback guided changes in the wording and grammar to ensure the questions were clear and understandable.

Common method bias

Several of the steps suggested by Rodríguez-Ardura and Meseguer-Artola (2020) were taken during the questionnaire design for this study to prevent common method bias. First, the wording of the questions was slightly adapted to be concise, clear and accurate, and clear definitions were provided for unfamiliar constructs before the questionnaire was pre-tested. Second, the item wording was improved after pre-testing the questionnaire with 20

participants from the study population. Third, the respondents were guaranteed anonymity and confidentiality in the introduction to discourage them from providing socially desirable responses. Fourth, respondents were assured that the research was purely for academic purposes to encourage honest responses.

RESULTS

Sample profile and mobile gaming habits

Table 1 shows the sample profile of the respondents as well as their mobile gaming habits. In total, 307 respondents participated in this study but not everyone completed the demographic questions at the end of the survey (n-values denoted per question). Overall, more respondents were male (55.5%) than female (43.5%). The respondents were predominantly Whites (46.2%), followed by Black Africans (21.3%), and the remainder of the sample was an almost equal split between Coloured (15.3%) and Indian/Asian (15.0%) respondents. Most of the respondents were aged between 18 and 25 years (46.5%) and between 26 and 35 years (39.5%). More than half the respondents indicated that they played mobile games daily (63.2%). The sample was dominated by respondents who played mobile games on an Android device (81.0%).

TABLE 1
DESCRIPTIVE STATISTICS OF THE MOBILE GAMING RESPONDENTS

Sample characteristic		Frequency (n)	Percentage (%)
Gender	Male	167	55.5
	Female	131	43.5
	Other	1	0.3
	Prefer not to answer	2	0.7
	Total	301	98.1
Population group	Black African	64	21.3
	Coloured	46	15.3
	Indian/Asian	45	15.0
	White	139	46.2
	Other	1	0.3
	Prefer not to answer	2	2.0
	Total	301	98.1
Age	18–25 years	139	46.5
	26–35 years	118	39.5
	36–45 years	38	12.7
	46–55 years	4	1.3
	Total	299	97.4
Mobile game play frequency	Daily	194	63.2
	Weekly	91	29.6
	Monthly	21	6.8
	Total	307	100
Device mobile games are played on	iPhone	47	15.4
	Android	248	81.0
	Others	11	3.6
	Total	306	99.7

Measurement model

Covariance-based structural equation modelling (SEM) was applied to explore the factors that influence gaming need satisfaction. The study adopted a two-step approach to evaluate the measurement and the structural model (Hair, Black, Babin & Anderson, 2016). The measurement model was used to test construct validity and reliability using

confirmatory factor analysis (CFA) (Pallant, 2016) by using AMOS Version 26 software. The initial results indicated two scale item factor loadings (GR1 related to personal gratification, and FC4 related to facilitating conditions) to be below the recommended threshold of 0.5 (Pallant, 2016). A decision was made to exclude the scale items from further analysis. Scholars recommend that when certain items are removed, the CFA should be tested again to determine its goodness of fit (Hair et al., 2016; Hooper, Coughlan & Mullen, 2008). The resultant second CFA produced model fit indices normed χ^2 (220) = 2.828 ($p = 0.000$); incremental fit index (IFI) = 0.907; comparative fit index (CFI) = 0.906; root mean square error of approximation (RMSEA) = 0.077; and standardised root mean square residual (SRMR) = 0.516 to indicate adequate model fit according to the recommended threshold values indicated in Table 2. Although values for the SRMR range from 0 to 1.0 with well-fitting models obtaining values less than 0.05 (Diamantopoulos & Siguaw, 2000), values as high as 0.08 are deemed acceptable (Hu & Bentler, 1999).

TABLE 2
FIT INDICES FOR THE MEASUREMENT MODEL

Fit indicators	Measurement model	Recommended thresholds	Recommending authors
χ^2/df	2.018	≤ 5.00	Hooper et al., 2008
CFI	0.920	≥ 0.90	Hu & Bentler, 1999
IFI	0.921	≥ 0.90	Hu & Bentler, 1999
RMSEA	0.077	≤ 0.08	Hu & Bentler, 1999
SRMR	0.516	≤ 0.08	Hu & Bentler, 1999

Convergent validity

Table 3 shows the average variance extracted (AVE), Cronbach's alpha coefficients and composite reliability values of the factors tested in this study. The results depict that the reliability of the factors range between 0.75 and 0.91, which meets the cut-off point of 0.7 or greater (Hair et al., 2016) to indicate internal consistency and construct reliability of the scales. The AVE values for the latent constructs range from 0.50 (FC) to 0.68 (ENJ), which all meet the minimum threshold of 0.5, as suggested by Fornell and Larcker (1981), to indicate that the scale items are representative of the underlying constructs. Thus, meeting or exceeding the recommended thresholds for the AVE, Cronbach's alpha and composite reliability values indicate convergent validity of the scales.

TABLE 3
AVE, CRONBACH'S ALPHA VALUES AND COMPOSITE RELIABILITY

Construct	AVE	Cronbach's alpha	Composite reliability
Effort expectancy (EE)	0.64	0.90	0.89
Personal gratification (GR)	0.58	0.87	0.87
Enjoyment (ENJ)	0.68	0.90	0.91
Facilitating condition (FC)	0.50	0.82	0.75
Gaming need satisfaction (SAT)	0.56	0.86	0.88

Discriminant validity of the constructs

All items had significant regression weights meeting the cut-off point value (0.5) together with their latent constructs ($p < 0.0001$) to show compliance with Hooper et al.'s (2008) cut-off points for achieving discriminant validity of the constructs.

According to Fornell and Larcker (1981), all latent constructs should have the squared root of AVE higher than their inter-correlation estimates with other corresponding constructs to confirm discriminant validity. Table 4 shows that all latent constructs had the squared root of AVE higher than their inter-correlation estimates with other corresponding constructs to show that discriminant validity is accomplished.

TABLE 4
RESULTS OF THE DISCRIMINANT ANALYSIS

	Effort Expectancy	Facilitating Conditions	Personal Gratification	Enjoyment	Satisfaction
Effort Expectancy	0,800				
Facilitating Conditions	0,462	0,707			
Personal gratification	0,398	0,571	0,762		
Enjoyment	0,415	0,654	0,672	0,825	
Satisfaction	0,349	0,682	0,579	0,701	0,748

Notes: The diagonal elements in bold represent the square roots of the AVE.

Structural model

After the measurement model confirmed convergent and discriminant validity of all constructs, the second step was to evaluate the structural model to test the hypothesised paths. Structural equation modelling (SEM) is highly recommended because of its capability to simultaneously test hypothesised relationships and the overall model fit (Hair et al., 2016). The results of the goodness of fit indices depicted in Table 5 for the structural model meet the cut-off points to indicate adequate model fit.

TABLE 5
RESULTS OF THE STRUCTURAL MODEL

Fit indicators	Structural model	Recommended thresholds	Recommending authors
χ^2/df	2.828	≤ 5.00	Hooper et al., 2008
CFI	0.906	≥ 0.90	Hu & Bentler, 1999
IFI	0.907	≥ 0.90	Hu & Bentler, 1999
RMSEA	0.077	≤ 0.08	Hu & Bentler, 1999
SRMR	0.516	≤ 0.08	Hu & Bentler, 1999

Hypotheses testing

Table 6 shows that facilitating conditions ($\beta = 0.375$, $p > 0.05$) and enjoyment ($\beta = 0.393$, $p > 0.05$) are statistically significant predictors of gaming need satisfaction, thereby respectively supporting H_2 and H_4 . Effort expectancy ($\beta = -0.032$, $p > 0.05$) and personal gratification ($\beta = 0.114$, $p > 0.05$) emerged as statistically insignificant predictors of gaming need satisfaction. Hence, H_1 and H_3 are not supported. Overall, the model explained 58.6% of the variances in mobile gaming need satisfaction.

TABLE 6
THE RESULTS OF THE HYPOTHESES TESTING

Alternative hypotheses	SRW	P value	Result
H_1 : Satisfaction $\leftarrow$ Effort expectancy	-0.032	0.561	Not supported
H_2 : Satisfaction $\leftarrow$ Facilitating conditions	0.375**	0.000	Supported
H_3 : Satisfaction $\leftarrow$ Personal gratification	0.114	0.115	Not supported
H_4 : Satisfaction $\leftarrow$ Enjoyment	0.393**	0.000	Supported

Notes: H, Hypothesis; SRW, standardised regression weight; **Significant at $p < 0.05$

DISCUSSION AND MANAGERIAL IMPLICATIONS

The purpose of this study was to determine the psychological drivers that best predict mobile gaming need satisfaction from an emerging economy perspective. The exponential growth of the mobile gaming industry warrants the need to understand mobile game success by predicting gaming need satisfaction. This is important because

increased satisfaction leads to improved loyalty (Sailer et al., 2017), repurchase intention (Chong, 2013), reduced price sensitivity, (Low, Lee & Chenget, 2013), and positive word of mouth (Popp & Woratschek, 2017). The results of this study may provide some insights to mobile game developers and marketers on how to invest strategically in the mobile gaming industry.

The results of the study reveal that a large proportion of the mobile game market in South Africa fall within the Generation Y cohort. These findings are congruent with reports by Price (2019), who reported that Generation Y students in South Africa are psychologically committed and behaviourally loyal towards their favourite mobile game. Therefore, it is plausible for marketers to pursue this cohort when promoting their mobile games, as Baby Boomers and Generation Xers seem not as technologically inclined.

It was not surprising that enjoyment emerged as the strongest driver of mobile gaming need satisfaction because previous studies had similar results (Merhi, 2016; Merikivi et al., 2017) that suggest enjoyment can lead to game need satisfaction. The key findings indicate that a relative understanding of the impact of satisfaction is fundamental in retaining players and attracting new players. According to Lee, Chiang and Hsiao (2018), there is a strong correlation between mobile game players' persistency and revenue for the game providers through advertisements. Turning a profit is becoming increasingly difficult, especially given that some authors (Merikivi et al., 2017) suggested that the time mobile gamers spend playing games is plateauing. Mobile game developers, particularly in South Africa, should leverage the availability of free Wi-Fi in the 4G era to develop more appealing and enjoyable games. Players can download and play mobile games for free at hotspots in all major cities, and can use the mobile game play to connect with friends and colleagues. Thus, mobile game developers should be innovative by providing enjoyable game experiences that enhances continued use. As suggested by Merikivi et al. (2017), mobile game developers could focus on the enjoyment aspects that pertain to game design, such as new features and contents, including new games or themes. Increased enjoyment and satisfaction relating to game design can also be achieved by enhancing game features that hold an element of surprise and unfamiliarity (novelty) and that are aesthetically pleasing in terms of attractiveness, layout and colours (design) (Baabdullah, 2018; Lu, Lin & Lin, 2016; Rutz et al., 2019).

Facilitating conditions emerged as the second predictor of mobile gaming need satisfaction. Facilitating conditions speaks to the responsiveness of the game providers whenever they are needed by the players. Lu et al. (2016) concurred that the game design and user interface have significant impact on the gaming experience to the extent that players can easily be offended or frustrated by a game if the features are implausible. User interaction is more desirable if players understand the game, navigation is consistent, the screen layout is efficient and the key controls follow standard conventions (Bulduklu, 2019). Reports on the South African Millennial consumer indicate that the cohort demand speed and need to be continuously engaged by brands. Being responsive to mobile gamers expeditiously in time of need may go a long way in avoiding the negative word of mouth on social media platforms that may be detrimental to branded game apps. If reports that 46.5% of South African consumers say they have been influenced to buy a product or service following social media reviews is anything to go by, (PricewaterhouseCoopers, 2018), then mobile game marketers need to provide helpful and frictionless gaming experiences to avoid any backlash. Patrathiranond (2019) suggested that introducing a YouTube channel can give companies a platform to allow for feedback from players and for conversations with them where they can comment and give suggestions for improvement, if possible, making them part of the game design and ensuring continued need satisfaction.

Contrary to the results of previous studies (Baabdullah, 2018; Kumar et al., 2017), it was surprising to note that personal gratification did not emerge as a significant predictor of mobile gaming need satisfaction. As noted earlier, personal gratification is achieved when game players find games that are intellectually challenging, are educational and allow them to escape boredom. Thus, a plausible explanation for the anomalous result could be that this study focussed primarily on casual games that do not require any special skills to play, and are not as challenging. Perhaps some game players seek games that require planning and forethought or fantasy-based games that require crucial decisions that can end in success or failure in the game to ensure satisfaction. Harrop (2020) reported that mobile gaming has long ceased to be a niche market but still contains different segments. It is therefore imperative for game developers to understand the unique needs of each segment in order to develop games that are more stimulating. Even though the results of this study may be skewed towards Millennials, caution should be taken

against treating the cohort as one population group because of stark differences in their beliefs, attitudes, norms and customs (PricewaterhouseCoopers, 2018). Despite the unexpected result, personal gratification should be given due consideration as literature suggests that personal gratification is as good as players' motives (Baabdullah, 2018; Kumar et al., 2017). Yang and Liu (2017) and Yang and Lin (2019) indicated that the motives for playing games for personal gratification range from having fun, stress relief, escape, competency, passing time, autonomy and social interaction (relatedness). Although authors recommended continuous inclusion of attractive contents in mobile games for personal gratification (Yang & Lin, 2019), mobile game developers should be cautious when they upgrade or add new features because that may decrease personal gratification. For example, players may quit the game, especially when asked to pay for an update or if features change the usability and playability of the game. As suggested by Sailer et al. (2017), mobile games could offer reward points that numerically represent a players' progress, such as redeemable, reputation or experience points to satisfy the need for competency and enhance personal gratification.

This study's result indicate that effort expectancy has an insignificant influence on mobile gaming need satisfaction, making the results even more surprising. Extant literature concur that game players tend to value the ease of use of a game (Baabdullah, 2019; Kimberly et al., 2016). A plausible explanation for the unexpected finding could be that perhaps some game players find mobile games too simplistic so that no effort is required on the part of the players. This finding concurs with that of Molinillo et al. (2020), who reported that when a mobile game is too easy to play, players quickly tire of it and can easily abandon the game. According to Molinillo et al. (2020), mobile games that reflect hedonic values (enjoyment and fun) can mitigate the effects of simplicity that leads to game abandonment. Although effort expectancy should be integral in developing mobile games that are easy to play, developers should be wary of new designs that changes the game play in a way that discourage players.

Based on the findings of this study, it is evident that facilitating conditions and enjoyment are two of the psychological drivers that game developers should address to enhance game need satisfaction among mobile game players.

STUDY CONTRIBUTIONS

The study makes both theoretical and practical contributions. The first theoretical contribution of this study is in testing a new framework that incorporates variables taken from the UTAUT2 and the GUESS frameworks. The UTAUT2 and the GUESS frameworks were considered most applicable to this study as they include relevant constructs to explain hedonic motivation in the context of mobile gaming. The need to develop the new framework was precipitated by inherent shortcomings of existing scales measuring gaming satisfaction, such as inability to cover other important gaming aspects or measures that would apply to only one aspect of the mobile gaming. The resultant framework was not only found to have strong psychometric properties, but was also found to have high content validity and good internal consistency and construct validity (Phan et al., 2016). Hence, it felt prudent to explain the two theories together in determining psychological gaming need satisfaction in this study. Chong (2013) posits that combining theories can collectively provide a better and more comprehensive understanding of consumer behaviour than when each theory is considered alone.

Second, and based on the literature review, the current study is the first in a developing economy to address the unexplored relations between variables drawn from different theoretical frameworks within the context of mobile gaming to understand mobile gaming need satisfaction through smartphones that are already well-integrated into users' lifestyles.

Third, the study focussed on adult consumers who had downloaded a mobile game application onto their devices at the time of the survey. The mobile gaming industry is growing rapidly in tandem with demographics and can be considered a pastime of children and adolescents (AdColony, 2021). As most prior studies focussed on the youth who are regarded as tech savvy (Applebaum, 2018), changing the focus to adult consumers could further the understanding of what motivates game play across a spectrum of users, thus making a theoretical contribution. Lundberg (2019) also proclaim that mobile gaming has gone mainstream, increasingly becoming a more fragmented cohort. This claim is consistent with that of Koch (2019), who found that 53% of internet users aged 45–54 years admitted to playing games on their smartphones during the first quarter of 2019. Due to increased accessibility of smartphones with

readily available mobile games, even older gamers are not just playing games casually, but have become committed game players too (AdColony, 2021).

From a practical standpoint, understanding mobile game need satisfaction is important for game designers, developers and advertisers. Thus, the practical contribution of the study is that understanding the nuances of the gaming audience helps to adopt a more targeted approach as not all games succeed in generating high numbers of downloads (Merikivi et al., 2017). Hence, the findings from this study could provide useful pointers to mobile game developers to better understand significant factors that make mobile games more marketable and acceptable.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The study has some limitations worth noting. First, the results of the study include some players whose frequency of play was minimal (6.8%), and that may skew results. Future studies could focus on more keen players who would then answer the questionnaire more effectively. Second, the convenience sampling method limits the generalisability of the results across South Africa. The age disparity of Generation Y cohort (85%) compared to Baby Boomers and Generation X (15%) may also have caused skewed results. The study did not make provision for any moderators such as gender and age, specifically to determine their impact on the different generations. This is important considering that more than 65% of Generation Z males in South Africa claim that gaming forms part of their identity (Wallace, 2019). Comparing generations could add to the available body of knowledge regarding psychological drivers of mobile gaming satisfaction and provide new research opportunities.

Future studies should also investigate additional factors, such as the influence of mobile gaming need satisfaction on motivation for future play and loyalty, to enhance the understanding of gaming need satisfaction. Despite these shortcomings, the study made significant contributions to the body of academic knowledge by furthering the understanding of gaming need satisfaction from an emerging country perspective.

REFERENCES

- AdColony, 2021. The modern mobile gamer: A study of everything. <https://www.adcolony.com/reports/the-modern-mobile-gamer/> (Accessed 20 May 2021).
- Africa.com. 2021. The unprecedented rise of mobile gaming in South Africa with 'Zero Data Game Sharing'. <https://africa.com/the-unprecedented-rise-of-mobile-gaming-in-south-africa-with-zero-data-game-sharing/> (Accessed 24 May 2021).
- Alomari, K. M., Ncube, C. & Shaalan, K. 2018. 'Predicting success of a mobile game: A proposed data analytics-based prediction model', Springer International Publishing AG. 127–134.
- Applebaum, M. 2018. Are younger shoppers always more tech friendly? Generational contrasts may be less stark than retailers think. <https://www.emarketer.com/content/are-younger-shoppers-always-more-tech-friendly?ecid=NL1014> (Accessed 20 October 2020).
- Baabdullah, A.M. 2018. 'Consumer adoption of mobile social network games (M-SNGs) in Saudi Arabia: The role of social influence, hedonic motivation and trust', *Technology in Society*, 53: 91–102.
- Batchelor, J. 2018. GamesIndustry.biz presents ... the year in numbers 2018. <https://www.gamesindustry.biz/articles/2018-12-17-gamesindustry-biz-presents-the-year-in-numbers-2018> (Accessed 19 June 2019).
- Bowman, N.D., Jöckel, S. & Dogruel L. 2015. 'The app market has been candy crushed: Observed and rationalized processes for selecting smartphone games', *Entertainment Computing*, 8: 1–9.
- Bulduklu, Y. 2019. 'Mobile games on the basis of uses and gratifications approach: A comparison of the mobile game habits of university and high school students', *Convergence: The International Journal of Research into New Media Technologies*, 25(5–6): 901–917.
- Choe, P., & Schumacher, D. 2015. 'Influence of different types of vibrations on technical acceptance of a mobile game aiming for hedonic satisfaction', *International Journal of Human-Computer Interaction*, 31: 33–43.

- Chong, A.Y.L. 2013. 'Understanding mobile commerce continuance intentions: An empirical analysis of Chinese consumers', *Journal of Computer Information Systems*, 53(4): 22–30.
- Clement, J. 2021. App Store and Google Play mobile game downloads worldwide 2016–2020. <https://www.statista.com/statistics/661553/global-app-stores-mobile-game-downloads/> [Accessed 24 May 2021].
- Davis, F.D. 1989. 'Perceived usefulness, perceived ease of use, and user acceptance of information technology', *MIS Quarterly*, 13: 319–340.
- Deloitte. 2017. Global mobile consumer survey: The South African cut. https://www2.deloitte.com/content/dam/Deloitte/za/Documents/technology-media-telecommunications/ZA-Deloitte-South-Africa-Mobile-Consumer-Survey-2017-Mobile_090718.pdf (Accessed 12 June 2019).
- Diamantopoulos, A. & Siguaw, J.A. (2000). *Introducing LISREL*. Sage Publications.
- eMarketer. 2017. Mobile app store revenues and downloads for mobile games and total mobile apps worldwide by OS, 2017 & 2018. <https://www.emarketer.com/chart/225874/mobile-app-store-revenues-downloads-mobile-games-total-mobile-apps-worldwide-by-os-2017-2018-billions> (Accessed 18 May 2019).
- Fornell, C. & Larcker, D.F. 1981. 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research*, 18: 39–50.
- Greenland, S. & Kwansah-Aidoo, K. 2012. 'The challenges of market research in emerging markets: A practitioner perspective from Sub-Saharan Africa', *Australasian Journal of Market & Social Research*, 20: 9–22.
- GSMA Intelligence. 2016. The mobile economy: Africa. <http://www.gsma.com/mobileeconomy/africa/> (Accessed 16 June 2019).
- Hair, J.F., Black, W.C., Babin, B. J. & Anderson, R.E. 2016. *Multivariate Data Analysis*. Seventh Edition. Pearson.
- Harrop, J. 2020. The modern mobile gamer: A study of everything. https://www.adcolony.com/reports/the-modern-mobile-gamer/?utm_source=eMarketer&utm_medium=Ad&utm_campaign=DISQO&utm_content=FYISpotlight (Accessed 17 May 2021).
- Hooper, D., Coughlan, J. & Mullen, M. 2008. 'Structural equation modelling: Guidelines for determining model fit', *Electronic Journal of Business Research Methods*, 6: 53–60.
- Hu, L.T. & Bentler, P.M. 1999. 'Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives', *Structural Equation Modeling*, 6: 1–55.
- Huang, C.Y., Hsu, C.H., Chen, D.Y. & Chan, K.T. 2014. 'Quantifying user satisfaction in mobile cloud games', In *Proceedings of Workshop on Mobile Video Delivery (MoViD'14)* (pp. 1–6). Association for Computing Machinery. <https://doi.org/10.1145/2579465.2579468>.
- Huang, L. & Hsieh, Y.J. 2011. 'Predicting online game loyalty based on need gratification and experiential motives', *Internet Research*, 21: 581–598.
- Kimberly, C., Lim, T.Y., Khong, C.W. & Wong, C.Y. 2016. 'Usability and player experience of input device for mobile gaming', *International Journal of Mobile Human-Computer Interaction*, 8: 52–69.
- Koch, L. 2019. Gaming goes mainstream, but play varies by gender and age. <https://www.emarketer.com/content/who-is-gaming-and-how-can-marketers-level-up?ecid=NL1009>. (Accessed 23 April 2019).
- Korhonen, H. & Koivisto, E.M.I. 2006. 'Playability heuristics for mobile games. In *Proceedings of the 8th conference on Human-computer interaction with mobile devices and services (MobileHCI '06)*, (pp. 9–16). Association for Computing Machinery.
- Kumar, K.A., Natarajan, S. & Acharjya, B. 2017. 'Understanding behavioural intention for adoption of mobile games', *ASBM Journal of Management*, 10: 6–18.
- Lee, C.H., Chiang, H.S. & Hsiao, K.L. 2018. 'What drives stickiness in location-based AR games? An examination of flow and satisfaction', *Telematics and Informatics*, 35: 1958–1970.
- Lin, C. & Lekhawipat, W. 2016. 'How customer expectations become adjusted after purchase', *International Journal of Electronic Commerce*, 20: 443–469.

- Lin, J.H.T., Wu, D.Y. & Tao, C.C. 2018. 'So scary, yet so fun: The role of self-efficacy', *New Media & Society*, 20: 3223–3242.
- Lopez-Fernandez, O., Männikkö, N., Kääriäinen, M., Griffiths, M.D. & Kuss, D. 2018. 'Mobile gaming and problematic smartphone use: A comparative study between Belgium and Finland', *Journal of Behavioral Addictions*, 7: 88–99.
- Low, W.S., Lee, J.D. & Cheng, S.M. 2013. 'The link between customer satisfaction and price sensitivity: An investigation of retailing industry in Taiwan', *Journal of Retailing and Consumer Services*, 20: 1–10.
- Lu, H.K., Lin, P.C. & Lin, Y.C. 2016. 'A study of factors affecting the purchase intention on mobile game apps', *Journal of Advances in Information Technology*, 7: 239–244.
- Lundberg, S. 2017. Who are the new gamers and how can you reach them? <https://www.businessofapps.com/news/half-of-mobilegamers-find-in-game-ads-memorable/15>. [Accessed December, 2020].
- Mediakix. 2019. An inside look at the massive \$70 billion-dollar mobile gaming industry. <https://mediakix.com/blog/mobile-gaming-industry-statistics-market-revenue/>. (Accessed 20 October 2020).
- Merhi, M.I. 2016. 'Towards a framework for online game adoption', *Computers in Human Behavior*, 60: 253–263.
- Merikivi, J., Tuunainen, V. & Nguyen, D. 2017. 'What makes continued mobile gaming enjoyable?', *Computers in Human Behavior*, 68: 411–421.
- Mills, D.J. & Allen, J.J. 2020. 'Self-determination theory, internet gaming disorder, and the mediating role of self-control', *Computers in Human Behavior*, 105: 1–12.
- Molinillo, S., Japutra, A. & Liébana-Cabanillas, F. 2020. 'Impact of perceived value on casual mobile game loyalty: The moderating effect of intensity of playing', *Journal of Consumer Behaviour*, 19: 493–504.
- Mordor Intelligence. 2021. Mobile gaming market—growth, trends, covid-19 impact, and forecasts (2021–2026). <https://www.mordorintelligence.com/industry-reports/mobile-games-market> (Accessed 20 May 2021).
- Nam, K. & Kim, H.J. 2020. 'The determinants of mobile game success in South Korea', *Telecommunications Policy*, 44: 1–13.
- Pallant, J. (2016). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS*. Fifth Edition. McGraw-Hill.
- Park, J. & Lee, G. 2012. 'Associations between personality traits and experiential gratification in an online gaming context', *Social Behavior and Personality*, 40: 855–862.
- Parker, C, Scott, S. & Geddes, A. 2019. *Snowball Sampling*. SAGE Research Methods Foundations. doi:10.4135/
- Patrathiranond, G. 2019. Top mobile games marketing strategies 2019. <https://appradar.com/blog/mobile-games-marketing/> (Accessed 04 January 2020).
- Peng, W., Lin, J.H., Pfeiffer, K.A. & Winn, B. 2012. 'Need satisfaction supportive game features as motivational determinants: An experimental study of a self-determination theory guided exergame', *Media Psychology*, 15: 175–196.
- Phan, M.H., Keebler, J.R. & Chaparro, B.S. 2016. 'The development and validation of the game user experience satisfaction scale (GUESS)', *Human Factors*, 58: 1217–1247.
- Popp, B. & Woratschek, H. 2017. 'Consumer-brand identification revisited: An integrative framework of brand identification, customer satisfaction, and price image and their role for brand loyalty and word of mouth', *Journal of Brand Management*, 24: 250–270.
- Price, D.G. 2019. *Modelling the antecedents of mobile gaming brand loyalty amongst Generation Y students*. Unpublished PhD thesis, North-West University, South Africa.
- PricewaterhouseCoopers (PwC South Africa). (2019). Consumer spend online. <https://www.pwc.co.za/en/press-room/consumer-spend-online.html> (Accessed 20 May 2021).
- Raosoft. 2014. Sample size calculator. <https://www.raosoft.com/samplesize.html> (Accessed 5 April 2020).
- Rodríguez-Ardura, I. & Meseguer-Artola, A. 2020. 'Editorial: How to prevent, detect and control common method variance in electronic commerce research', *Journal of Theoretical and Applied Electronic Commerce Research*, 15(2): 1–4.

- Rutz, O., Aravindakshan, A. & Rubel, O. 2019. 'Measuring and forecasting mobile game app engagement', *International Journal of Research in Marketing*, 36: 185–199.
- Sailer, M., Hense, J.U., Mayr, S.K. & Mandl, H. 2017. 'How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction', *Computers in Human Behavior*, 69: 371–380.
- Shams, G., Rehman, M.A., Samad, S. & Oikarinen, E.L. 2020. 'Exploring customer's mobile banking experiences and expectations among generations X, Y and Z', *Journal of Financial Services Marketing*, 25: 1–13.
- Statista. 2019. Number of smartphone users in South Africa from 2014 to 2023 (in millions)*. <https://www.statista.com/statistics/488376/forecast-of-smartphone-users-in-south-africa/> (Accessed 18 May 2021).
- Taheri, F. & Akbari, N. 2016. 'Moderating effects of online shopping experience on customer satisfaction and repurchase intentions', *International Academic Journal of Business Management*, 3: 140–146.
- Tam, C., Santos, D. & Oliveira, T. 2018. 'Exploring the influential factors of continuance intention to use mobile Apps: Extending the expectation confirmation model', *Information Systems Frontiers*, 22: 243–257.
- Venkatesh, V., Thong, J.Y. & Xu, X. 2012. 'Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology', *MIS Quarterly*: 157–178.
- Wadsworth, D., Brock, S., Daly, C. & Robinson, L. 2014. 'Elementary students' physical activity and enjoyment during active video gaming and a modified tennis activity', *Journal of Physical Education and Sport*, 14: 311–316.
- Wallace, F. 2019. The impact of generation z on the gaming community. <https://www.headstuff.org/entertainment/gaming/the-impact-of-generation-z-on-the-gaming-community/> (Accessed 13 July 2020).
- Yang, H.L. & Lin, R.X. 2019. 'Why do people continue to play mobile game apps? A perspective of individual motivation, social factor and gaming factor', *Journal of Internet Technology*, 20: 1925–1936.
- Yang, C.C. & Liu, D. 2017. 'Motives Matter: Motives for playing Poke'mon Go and implications for well-being', *Cyberpsychology, Behavior, and Social Networking*, 20: 52–60.
- Zheng, L. 2020. 'The role of consumption emotions in users' mobile gaming application continuance intention', *Information Technology & People*, 33(1): 340–360.

Consumer perception towards online shopping behaviour in South Africa

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ABSTRACT

Customer perceptions affect their actions, leisure and buying habits, which has a great impact on online shopping. Globally, electronic retailing has undergone extraordinary growth in the past few years. In determining the uptake of online shopping behaviour in South Africa, the study set out to determine consumer perception towards online shopping. Through a quantitative approach, the study examines the perceptions of over 4 834 respondents who formed the sample for the study. The results reveal that prices and delivery time were the overall motivating factors to shop. The study also found that factors that influence respondents' perception of online shopping were flexibility, convenience, and ease of accessibility. The study recommends dynamic pricing that applies variable pricing could be implemented more broadly, to online shoppers. Given the demographics of those who do not shop online, price discrimination using the third-degree discrimination strategy, which is based on the individual consumer, where, for example, students are given a reasonable price option, could potentially activate online shopping of those who do not engage in online shopping.

Keywords: online shopping, consumer behaviour, electronic retailing, customer perceptions.

INTRODUCTION

The drive to encourage online shopping in South Africa is beginning to gain momentum as many brick and mortar retailers have made a shift towards online retailing. Whilst this seems to align itself with global trends, the challenge is to drive traffic towards online shopping. E-commerce accounts for a small proportion of total retail spend with estimates of the proportion of e-commerce at 1-2% of retail in South Africa (Prinsloo, 2016: 1). Considering this, online retailers must understand how consumers perceive online shopping and how these perceptions affect their buying behaviour to grow their online businesses. Rahman et al., (2018: 19) suggest when online retailers can identify the associations between factors that motivate online shopping then they can adapt their strategies to convert potential customers into active ones and prevent their loyal customers from switching.

LITERATURE REVIEW

Customer Perception

Chee & Yazdanifard (2021: 117) define customer perception as customers' opinion of the electronic retailer, brand, or product either through direct or indirect experience that the customer carries out with the retailer. Schiffman & Wisenblit (2015: 114) refer to customer perception as the process by which an individual selects, organizes and

interprets stimuli into a meaningful and coherent picture of the world. Customers may be exposed to the same stimuli, but how each customer recognizes, organizes, and interprets is different based on each customer needs, values, or expectations. Moreover, consumers can be very selective when exposed to stimuli. Consumers pay attention to some aspects and ignore others.

Customer perception is a very critical part of processing information systems in the human brain. Stimuli such as objects, events or messages are interlinked series of activities in a system that is transformed into information and stored in the customer's brain. This implies that negative customer perception is not good for online retailers since it is crucial to attract and retain customers (Renko & Popovic, 2015: 23). Aruna & Williams (2015: 51) additionally reveal that customer perception towards electronic retailing and intention to purchase online is not only affected by usefulness, ease of use or enjoyment. External factors such as product characteristics, previous online shopping experience, situational factors and trust in online shopping are also factors that impact customer perception and intention to shop online.

Consumer Buying Behaviour

Consumer behaviour is the study of how individuals make decisions to spend their available resources (time, money and effort) on consumption related aspects. It is the study of when, why, how, where and what people do or do not buy products (Lukman & Vukasovic, 2020). Moreover, it is a process utilized by customers in search of their desired products, choosing, purchasing, and disposing to satisfy their needs (Berman, Evans & Chatterjee, 2018: 200). Customers behave differently and they are influenced by various internal and external factors. The study of consumers' buying behaviour emphasizes on how individual consumers make a decision to spend on goods or services. In a prevailing competitive environment, marketers must recognize the changing tastes and preferences of consumers for their survival (Dhiman, Chand & Gupta, 2018: 188-200). According to Mehta, Saxena & Purohit (2020: 292), consumer behaviour is an important and constant decision-making process of searching, purchasing, using, evaluating, and disposing of products and services. Hjort et al., (2013: 853) mention that customer buying behaviour is often influenced by customer perception. Furthermore, it is crucial for retailers to observe their customers and implement solutions accordingly.

Kahn (2018: 150) highlights that consumers desire both pleasurable and seamless experiences from e-retailers. If dissatisfied, they will not be hesitant to switch to other e-retailers who will provide superior value through offering such an experience. This means that it is crucial for e-retailers to critically understand why consumers behave in a certain way during a specific time in order to provide consumers with their needs/ wants and remain competitive in the retail industry (Antwi 2021: 01). Consumer buying behaviour is different to each online customer. The difference depends on buying choices, which can be easily influenced by buying habits and choices that are in-turn tampered by social and psychological drivers that affect the buying decision process (Mehta et al., 2020: 292). Demeyer-Heydenrych & Cunningham (2018: 17) mention that it is imperative to understand why consumers make certain decisions or choices. It will allow marketers and e-retailers to develop successful strategies and it can also predict behaviour.

Online Shopping Behaviour and Online Customer Experience

Online shopping behaviour differs to traditional shopping. A negative traditional shopping behaviour can easily be changed through many methods unlike online shopping behaviour (Reddy & Chalam 2015: 324). Store personnel can help appease a dissatisfied customer with personal engagement. However, the online experience must pre-empt the concerns of the customer, to ensure a positive experience. Hjort et al., (2013: 853) mention that customer buying behaviour is often influenced by customer perception, they further explain that it is crucial for retailers to always observe their customers and implement solutions where it is possible.

Consumer buying behaviour is different to every online customer. The difference depends on buying choices that can easily be influenced by buying habits; and choices that are in-turn tampered by social and psychological drivers that affect the buying decision process (Mehta et al., 2020: 292). Customers are playing an important role in electronic retailing by spreading and sharing their comments on social media platforms. Word-of-mouth can easily assist online retailers to identify the factors that can affect consumer's buying behaviour and the associations between these

factors and type of online customers. Once that has been identified, electronic retailers can further widen their marketing strategies to convert potential customers into active ones and retain them as loyal customers as one of the assets of the business (Yee & Yazdanifard, 2014: 2249).

Singh (2019: 1302) believes online customer experience is a set of interactions between a customer and a product or e-retailer, which provoke a reaction. The customer is involved in cognitive and affective processes of incoming sensory information from the retailer's website, the results received are shaped to the formation of an impression in memory. Several antecedent situations influence the cognitive and affective state of the customer. Consumers now have easy access to information and various options to choose from thus creating consumers to be less tolerant of inconsistent or poor service.

Online customers are not just shoppers but also users of technology and information seekers. Online customer experience is considered to be more complex than the online shopping experience. There is a difference between online customers and offline customers. Online customers are mostly concerned about purchase benefits, time saving and choice (Vasic, Kilibarda & Kaurin, 2019: 74). Svatosova (2020: 144) adds that it is crucial for e-retailers to retain and satisfy consumers to gain competitive advantage. When consumers are satisfied with the e-retailer, they will become loyal. Furthermore, consumers also often share their experiences on social media networks, therefore maintaining good reputation is important.

Perceived motivators that encourage online shopping

Online shopping offers several benefits that cannot be offered by physical stores, such as convenience, providing a wide range of products, promoting user-friendly websites and saving time (Usman & Kumar, 2020). Convenience refers to the reduced time and effort it takes to make a purchase. Customers have the opportunity of purchasing any product from any part of the world at any time without physically visiting the store (Usman & Kumar, 2020). Moreover, convenience is considered one of the most significant factors influencing online shopping (Omotayo & Omotope, 2018). Accessibility is another major determinant that can simply influence consumers to shop online. Accessibility is described as the extent to which the required technology for online transactions is easily available for people to use (Chiemeké & Ewuekpae, 2011). Trust, which is one of the fundamental bases of trade, can be described as a readiness to depend on or to become vulnerable to another party when one cannot control the other party's actions (Abdulgani & Suhaimi, 2014). To build on a trust relationship between a consumer and the retailer, Maia et al., (2019) suggest, that a firm reputation, for example, may indicate the level of consumer trust with the retailer. This signifies that the reputation of an online store will have a positive effect in shaping the relationship between it and its customers, becoming a determinant factor of trust. Maia et al., (2019) suggest that the use of online comments and ratings, as well as the participation in forums and communities, depending on how they are, positive or negative, may increase or decrease the consumer perception of the safety of transactions made electronically and the delivery conditions of the product. In this perspective, consumers who consider a high level of transaction safety as relevant to their level of trust may consider e-commerce as a potential online marketplace. The interconnectedness of these factors will most likely motivate consumers to shop online as the level of trust increases, the level of risk decreases. Repeat purchases reinforce the confidence of online transactions.

The literature examined important constructs of this study and looked into customer perception, which relies on the experience and expectation of the online shopper. Based on the framing of the literature presented, the main aim of the study is to determine consumer perception towards online shopping behaviour in South Africa. To achieve this, the following research objectives were formulated:

Research Objectives:

- To analyse the purchasing frequency of online shoppers in South Africa.
- To ascertain the perspectives of shoppers who do not purchase online.
- To ascertain the perspectives of those who shop online.
- To determine the factors that motivate online buying behaviour of shoppers in South Africa.

RESEARCH STRATEGY

This study follows a descriptive research design that supports the objectives of the study. A quantitative approach was used to determine the perception of online shoppers. Closed-ended questionnaires were used to obtain relevant data from the respondents in the study. For this study, the target population consisted of online customers who purchase apparel at brick-and-click retailers in KwaZulu-Natal. Non-probability purposive sampling was ideal for this study as it sought out a distinct trait from consumers who are online shoppers. Nonprobability samples are more relevant with the rapid growth of online questionnaires (Saunders et al., 2019: 315). The researchers identified a national apparel brick-and-click retailer, who hosted the questionnaire on their website for two weeks. This generated a response of 5 872 of which 4 834 were completed questionnaires.

RESULTS

The questionnaires were available online for two weeks; 5 872 responses were received of which 4 834 remained after removal of incomplete questionnaires and data cleaning. Of the complete questionnaires, table 1 shows: 4 357 (90.1%) respondents are female; 2 110 (43.6%) respondents are Black; 1 627 (33.7%) respondents are in the age group 24-29; 3 050 (63.1%) respondents are employed; 2 048 (42.4%) respondents are in the income group 0-R5 000; 2 547 (52.7%) respondents have matric as their highest qualification.

TABLE 1
RESPONDENT DEMOGRAPHICS

Age		Race		Gender	
Description	Count (%)	Description	Count (%)	Description	Count (%)
Under 24	1 513 (31.3)	Black	2 110 (43.6)	Female	4 357 (90.1)
24-29	1 627 (33.7)	Coloured	1 122 (23.2)	Male	477 (9.9)
30-35	901 (18.6)	White	1 035 (21.4)		
36-41	414 (8.6)	Indian	500 (10.3)		
Over 41	379 (7.8)	Asian	67 (1.4)		
Employment		Education		Income	
Description	Count (%)	Description	Count (%)	Description	Count (%)
Student	1 192 (24.7)	Below matric	300 (6.2)	0- R5 000	2 048 (42.4)
Unemployed	269 (5.6)	Matriculated	2 547 (52.7)	R5 001- R10 000	1 185 (24.5)
Self-employed	295 (6.1)	Graduate	1 438 (29.7)	R10 001- R15 000	762 (15.8)
Employed	3 050 (63.1)	Postgraduate	549 (11.4)	R15 001- R20 000	434 (9.0)
Retired	28 (0.6)			R20 001 and above	405 (8.4)

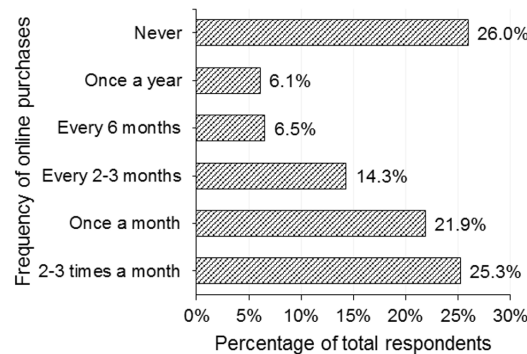
Table 2 shows that there are more women who are online shoppers than men. According to Davis et al., (2017: 119), gender differences in e-commerce will always differ from one study to the other as both men and women use e-commerce for various reasons.

TABLE 2
GENDER OF RESPONDENTS CROSS-TABULATED WITH ONLINE SHOPPING

Online shopping (%)	Gender (%)		
	Female	Male	Total
Do not shop online	1 077 (22.3)	178 (3.7)	1 255 (26)
Shop online	3 280 (67.8)	299 (6.2)	3 579 (74)
Total	4 357 (90.1)	477 (9.9)	4 834 (100)

Figure 1 indicates that 26.0% have never shopped online. The total number of online shoppers, regardless of the frequency of shopping, is 74.0%. The highest frequency of online shoppers (21.9%) is those who shop 2-3 times in a month. For the 74% of respondents to engage in online shopping on a periodic basis, the frequency of which is defined in Figure 1, implies that these respondents appear to be familiar with online shopping and are motivated to shop online.

FIGURE 1
PSYCHOLOGICAL DRIVERS OF MOBILE GAMING NEED SATISFACTION



CHAID ANALYSIS (Chi-square Automatic Interaction Detector)

The frequency of online shopping was grouped as follows: 'Never', 'At least once per month', and 'Less than once per month'. The analysis is done in three stages and considers which demographic predictors associate with frequency of online shopping, what would motivate respondents to shop online, and how online shoppers experience online shopping.

Results of the CHAID Analysis

The factor with the strongest association to the frequency of online shopping was income (p -value < 0.001). 42.4% (2 048) of the respondents fall in the income group 0-R5 000. Of those respondents in the income group 0-R5 000, 39.9% (818) do not shop online. For the 0-R5 000 income group, the factor that is second most associated with frequency is race (p -value < 0.001). 27.1% (1 309) of the respondents earn 0-R5 000 and are Black. Of these respondents, 47.9% (627) do not shop online. Therefore, it can be concluded that the respondents with the greatest impact on 'Never' shop online earn 0-R5 000 and are Black. Of the other races in the 0-R5 000 group, 191 (25.8%) of the 739 respondents, do not shop online. Of these, 160 are younger than 36 years, and 31 are 36 years or older. However, the 31 respondents constitute 47.0% of the respondents in this age group. The respondents with the second greatest impact on 'Never' shop online earn R5 001-R10 000 (237), of which 206 are female, and 31 are male. However, the 31 males constitute 36.5% of males who earn R5 001-R10 000. Using the Exhaustive CHAID classification method the respondents who never shop online can be predicted with 52.4% accuracy. Diagram 1 graphically displays the above-mentioned results.

Figure 2 considers the 1 255 respondents that never shop online. The following chart indicates the factors selected by the aforementioned group. Delivery time (58.2%) and prices (59.9%) were identified as the two main factors that would motivate these respondents to shop online. These two factors are followed closely by privacy and confidentiality of information (51.6%) and security (51.1%).

FIGURE 2
FACTORS AFFECTING RESPONDENTS WHO DO NOT SHOP ONLINE

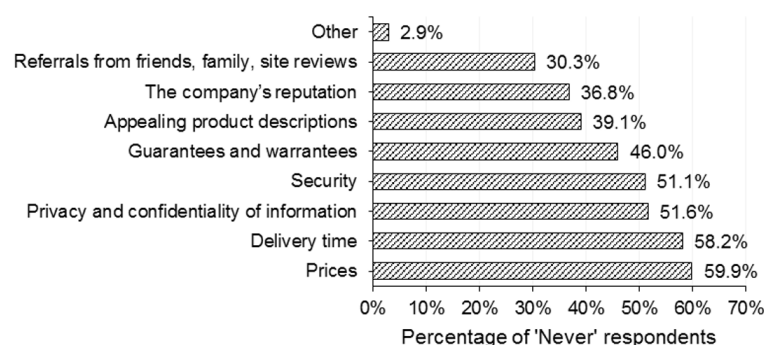


**DIAGRAM 1
NEVER SHOP ONLINE**

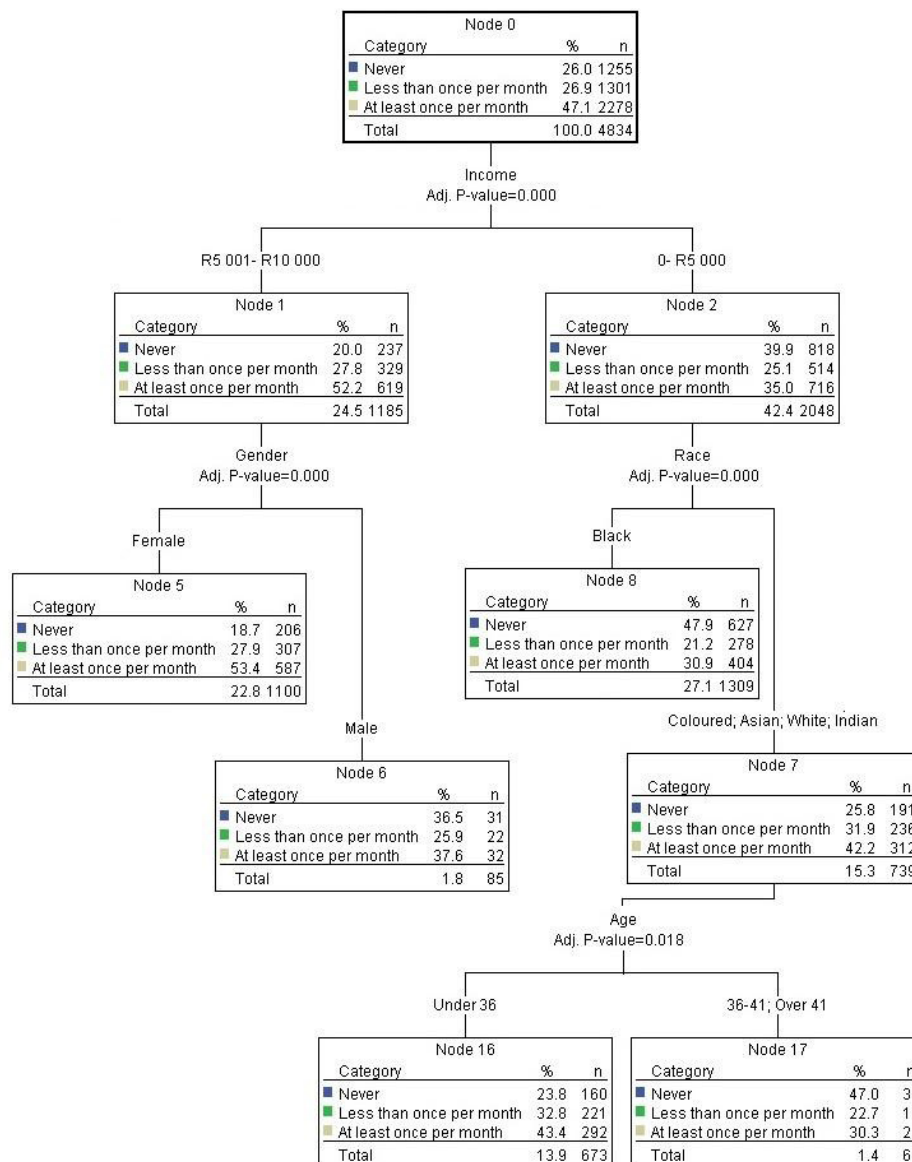


Figure 3 indicate a reflection of the 1 255 respondents on their opinions regarding online shopping. The majority believe that online shopping is Easily Accessible (80.2%), Flexible (76.0%), and Convenient (64.1%). However, fewer are of the opinion that online shopping is secure (38.5%), and even fewer are prepared to make online payments (20.3%). Finally, only 16.0% have a positive attitude toward online shopping. There is no level of income that has the greatest effect on shopping 'Less than once per month' since the response rates range from 25.1% to 30.4%. Using the CHAID classification the prediction accuracy for 'Less than once per month' is a mere 2.5%.

**FIGURE 3
OPINION OF RESPONDENTS WHO DO NOT SHOP ONLINE**

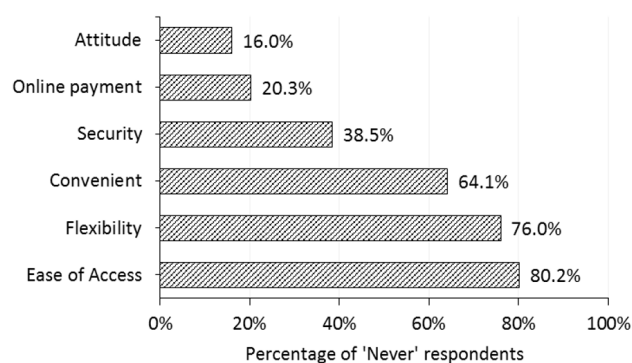


Diagram 2 shows that the income group 0-R5 000 constitutes the highest single proportion of respondents (42.4% of the total sample), however, only 35% of these respondents claim to shop online at least once per month. Thus, this income group has the lowest impact. Subdividing this income group further according to the remaining demographics results in impact levels less than the average of 47.1%. Income level is positively associated with shopping online at least once per month since the frequency of online shopping at least once per month for the income groups are: over R15 000 - 62.2% (of 839), R10 001-R15 000 - 55.2% (of 762), R5 001-R10 000 - 52.2% (of 1185), and 0-R5 000 - 35.0% (of 2048). Gender was most significantly associated with the income level R5 001-R10 000 (p-value < 0.001) of which females had the highest response rate (53.4% of 1100). The next most significantly associated factor, for the R5 001-R10 000 income group, was race (p-value = 0.004). Although Asian/Indian females earning 0-R5 000 per month make up only 2.9% of the sample they have a response rate of 63.3%, which is significantly higher than the average of 47.1%. The income group over R15 000 make up 17.4% of the sample and have a response rate of 62.2%. The factor 'Age' is significantly associated with this income group (p-value < 0.001). The respondents earning more than R15 000 per month in the age group 41 and younger make up 13.8% of the sample and have a response rate of 65.7%, which is significantly higher than the average of 47.1%. The income group R10 001-R15 000 make up 15.8% of the sample and have a response rate of 55.2%. Age has the most significant association with this income group (p-value < 0.001). Respondents earning R10 001-R15 000 and are 41 years and younger make up 14% of the sample and have a response rate of 58.5%, which is above the average of 47.1%. Using the derived classification method, the respondents who shop online 'At least once per month' can be predicted with 80.2% accuracy.

DIAGRAM 2
AT LEAST ONCE PER MONT

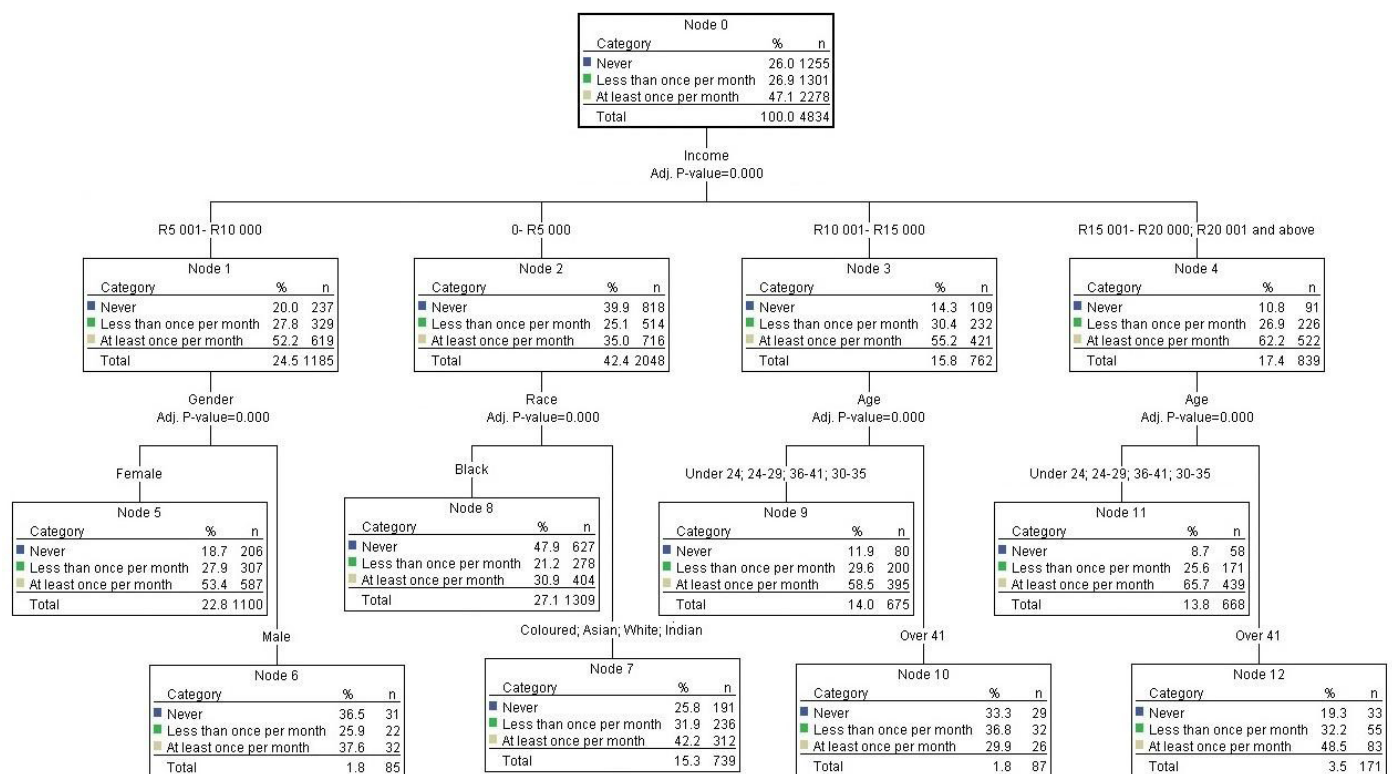


Table 3 reveals the 4 response groups and determine what motivates them to do online shopping and how they perceive online shopping. For the income group over R15 000, Prices (83.1%) and Delivery Time (82.2%) were the highest motivating factors for online shopping. The least motivators were Guarantees and Warrantees, and Referrals from friends, family, or site reviews.

TABLE 3
RESPONDENTS MOTIVATING FACTORS TO SHOP ONLINE

Motivating factors of respondents to shop online	Income group of R0- R5 000	Income group of R5 000-R10 000, Female	Income group of R10 000-R15 000, Age 18-41	Income group over R15 000, Age 18-41
Prices	71.2	81.1	82.0	83.1
Delivery time	70.0	79.0	81.5	82.2
The company reputation	51.7	50.6	57.7	57.8
Privacy and confidentiality of information	51.5	54.3	53.7	57.3
Security	51.1	49.4	50.9	53.2
Appealing, product description	45.7	52.8	53.9	54.1
Guarantees and warrantees	44.7	45.3	48.1	50.5
Referrals from friends, family or site reviews	27.8	26.7	22.3	23.1
Other	5.9	4.6	6.1	9.4

Table 4 illustrate that Flexibility, Convenience and Ease of Accessibility has a stronger influence over respondents' perception than Security, Attitude, and Online Payment.

TABLE 4
PERCEPTIONS OF RESPONDENTS WHO SHOP ONLINE

Factors influencing respondent's perception	Income group of R0- R5 000	Income group of R5 000-R10 000, Female	Income group of R10 000-R15 000, Age 18-41	Income group over R15 000, Age 18-41
Flexibility	89.7	94.0	94.7	92.2
Convenience	82.4	84.7	86.8	86.3
Ease of accessibility	79.1	79.6	82.0	74.0
Security	58.5	63.4	65.0	70.3
Attitude	38.1	40.9	49.4	51.6
Online payment	34.5	37.6	37.5	48.9

FINDINGS

The study set out to establish consumer perceptions towards online shopping behaviour. To achieve this, the study analysed the purchasing frequency of online shoppers; the perceptions of those who shop online and those who do not as well as determining the factors that motivate online buying behaviour of shoppers in South Africa. The study found that 1 221 (25.3%) respondents shop 2-3 times a month whilst 1 255 (26.0%) respondents never shop online. Overall, 74.0% (3 577) shop online either '2-3 times a month', 'Once a month', 'Every 2-3 months', 'Every 6 months' or even 'Once a year'. This suggests that previous online shopping experience positively relates to repeat online purchase behaviour. Furthermore, this shows the growth of online shopping in South Africa.

The breakdown in Diagram 1 determined the following:

Income is the factor with the strongest (positive) association to frequency of online shopping, with 2 048 of the respondents who fall in the income group 0-R5 000 of which 39.9% (818) do not shop online.

The second factor associated with frequency of online shopping varies between income groups. For 0-R5 000 it is race, where 27.1% (1 309) of respondents who earn 0-R5 000 are Black of which 47.9% do not shop online. For R5 001-R10 000 it is gender, where 22.8% (1 100) of the respondents who earn R5 001-R10 000 are female of which 53.4% shop online at least once per month. For over R10 000 it is age, where 27.8% (1 343) of the respondents who earn over R10 000 are at most 40 years old of which 62.1% shop online at least once per month.

Those who do not shop online cited delivery time and prices as the main factors that would motivate them to shop online (Figure 2). These are also the same two factors that were identified by those with an income of over R15 000 as the main motivating factors for shopping online (Table 3). Moreover, for those who do not shop online, their perception of online shopping is that 'It is easily accessible' (80.2%); 'It is flexible' (76.0%) and Convenient (64.1%). Similarly, across all four of the income groups, depicted in Table 3, Flexibility, Convenience, and Easily Accessible form the main factors that influence respondents' perception of online shopping. Retailers offering more convenience and flexibility will provide better options for their online customers. The perceived usefulness that online customers may derive from these factors can lead to customer satisfaction, which will contribute to a positive customer experience.

In Diagram 2, whilst the income group 0-R5 000 had the highest proportion of respondents (42.4%, 2 049) only 35.0%, 716 of these claims to shop online. For these respondents, income had the lowest impact. However, gender and race were the most significantly associated factors whilst for the income group R10 001 and over, age was the most significant factor associated with income group. Table 2 shows that for all the four income groups, that price was the main motivating factor followed by delivery time. These findings are consistent with Maia et al., (2019) who found that price advantages also attract consumer attention, increasing the frequency of online purchases. A perceived competitive price can be considered less cost from the consumer perspective when they pay less or want to reduce other costs of the product acquisition such as delivery, security, trust, and reputation, for example (Sullivan & Kim, 2018). A product whose price is seen as cheap or reasonable by the final consumer is more likely to be acquired (Maia et al., 2019). The company's reputation was the third motivating factor which also implies online shoppers consider the online stores they purchase from and ensure the stores have a good reputation. The delivery experience is pivotal in creating long-term satisfaction (de Vos, 2016) that motivates online shoppers to repeat online purchases from the same retailer. Being able to trust a retailer to ensure that delivery of the order is made timeously is based on the reputation of the retailer. A good reputation signals a firm's (seller's) trustworthiness, integrity, and reliability to constituents, which in turn reduce behavioural uncertainty (Walsh et al., 2015). Finally, the following generalizations can be made:

- Delivery Time and Price are factors that would promote online shopping.
- Online shoppers who shop at least once a month earn upwards of R 10 000 and are younger than 41 years of age.
- Flexibility, Convenience, and Ease of Accessibility influences the perceptions of online shoppers.

Based on the findings the following recommendations are made:

RECOMMENDATIONS:

For those who do not shop online, the study reveals Delivery Time and Price are factors that would motivate online shopping. Organisations that want to attract online shoppers, should develop their delivery strategy to involve the shopper in every step of the process to ensure their products are tracked from purchase to the point of delivery with the shortest turnaround time.

Online customer acquisition is important to building the segment as well as increasing market share for the organisation. Pricing strategies are important for both the organisation and the customer, as the organisation continually seeks to ensure that customers are charged a fair price that accurately reflects the value of the product/service. Dynamic pricing that applies variable pricing, for online shoppers should be implemented more broadly for online shoppers. Given the demographics of those who do not shop online, price discrimination using the third-degree discrimination strategy, which is based on the individual consumer whereby, for example, students, are given a reasonable price option, could potentially activate online shopping of those who do not engage in online shopping.

This could also increase the frequency of online shoppers.

Flexibility, Convenience, and Ease of Accessibility are factors that influence the perceptions of online shoppers. Organisations who wish to increase their online market share should monitor their customers' online experience through engaging with the customer to ensure their online stores offer flexibility, convenience, and are accessible.

CONCLUSION

The study made some insightful findings that can be generalized to online apparel retail shoppers. Furthermore, it advances our understanding of what the perceptions are of those who do not shop online and what motivates those who engage in online shopping. The contributions of the study findings can be implemented strategically to ensure a positive outcome with increased online market shares and larger segments of online shoppers in South Africa.

REFERENCES

- Abdulgani, M. A. & Suhaimi, M. A. 2014. 'Exploring factors that influence Muslim intention to purchase online'. In The 5th International Conference on Information and Communication Technology for the Muslim World (ICT4M), pp. 1–6.
- Antwi, S. 2021. "I just like this e-Retailer": Understanding online consumers repurchase intention from relationship quality perspective'. *Journal of retailing and consumer services (Online)*, 61: 1-6. Available: <https://www.sciencedirect.com/science/article/pii/S096969892100134X> (Accessed 25 July 2021).
- Aruna, S. & Williams, A. J. 2015. 'A study on consumer behaviour towards online shopping in coimbatore district'. *International journal of research in business management (Online)*, 3(7): 51-62. Available: <http://oaji.net/articles/2015/490-1438688196.pdf> (Accessed 03 November).
- Berman, B., Evans, J. R. & Chatterjee, P. 2018. *Retail management: a strategic approach*. 13th ed. New York: Pearson.
- Chee, J. & Yazdanifard, R. 2021. The Influence of Customer Perception in Selection of Korean Restaurant in Malaysia.' *International Journal of Management, Accounting and Economics* Vol.8, No.2.
- Chiemeke, S. C. & Ewwiekpaefe, A. E. 2011. 'A conceptual framework of a modified unified theory of acceptance and use of technology (UTAUT) Model with Nigerian factors in E-commerce adoption'. *Educational Research*, 2(12), 1719–1726.
- Davis, R., Smith, S. D. & Lang, B. U. 2017. 'A comparison of online and offline gender and goal directed shopping online'. *Journal of Retailing and Consumer Services (online)*, 38: 118-125. Available: <https://www.sciencedirect.com/science/article/pii/S096969891730108X> (Accessed 19 September 2021).
- De Meyer-Heydenrych, C. & Cunningham, N. 2018. 'Factors influencing consumers' decision about which international clothing retailer to purchase from: A South African value and image perspective' (online). Available: <https://iises.net/proceedings/41st-international-academic-conference-venice/table-of-content> (Accessed 08 October 2021).
- De Vos, K. 2016. 'Ecommerce delivery trends: What contributes to a positive experience?' (online) Available: <https://www.mycustomer.com/selling/ecommerce/> (Accessed 6 October 2021).
- Dhiman, R., Chand, K. P. & Gupta, S. 2018. 'Behavioural Aspects Influencing Decision to Purchase Apparels amongst Young Indian Consumers'. *Fortune Institute of International Business Business Review*, 7(3) 188–200 2018 SAGE Publications.
- Hjort, K., Lantz, B., Ericsson, D. & Gattorna, J. 2013. 'Customer segmentation based on buying and returning behaviour'. *International Journal of Physical Distribution & Logistics Management (online)*, 43(10): 852-865. Available: <https://www.emerald.com/insight/content/doi/10.1108/IJPDLM-02-2013-0020/full/html?fullSc=1> (Accessed 19 September 2021).
- Kahn, B. E. 2018. *The Shopping Revolution: How Successful Retailers Win Customers in an Era of Endless Disruption*. 1st ed. United State: Wharton Digital Press.
- Lukman, A. & Vukasovic, T. 2020. 'The Factors Influencing the Buying Decision of Customers Behaviour', *Management* 15(3) 221-233.
- Maia, C. R, Lunardi, G. L., Dolci, L. D. & D'Avila, C. 2019. 'Competitive Price and Trust as Determinants of Purchase Intention in Social Commerce'. *Brazilian Administrative Review*, Vol 16 (4). <https://doi.org/10.1590/1807-7692bar2019190074>.

- Mehta, S., Saxena, T. & Purohit, N. 2020. 'The New Consumer Behaviour Paradigm amid COVID-19: Permanent or Transient.' *Journal of Health Management* (online), 22(2): 291–301. (Online) Available: <https://journals.sagepub.com/doi/pdf/10.1177/0972063420940834> (Accessed 17 September 2021).
- Omotayo, F. O. & Omotope, A. R. 2018. 'Determinants of continuance intention to use online shops in Nigeria' *Journal of Internet Banking and Commerce*, 23(2), 1–48.
- Prinsloo, D. 2016. 'Online vs. in-store shopping'. (Online) Available from: <http://www.urbanstudies.co.za/wp-content/uploads/2016/11/SACSC-Research-ReportUrban-Studies-Online-VS-In-Store-Sho...-2.pdf> (Accessed 06 August 2021).
- Rahman, M. A., Islam, M. A., Esha, B.H., Sultana, N. & Chakravorty, S. 2018. 'Consumer buying behavior towards online shopping: An empirical study on Dhaka city, Bangladesh'. *Cogent Business & Management* (online), 5(1): 1-23. (Online) Available: <https://www.tandfonline.com/doi/full/10.1080/23311975.2018.1514940> (Accessed 17 September 2021).
- Reddy, M, S. & Chalan, G. V. 2015. Online shopping and buyer's perception: a critical analysis. *International journal of business and management* (online), 3(5): 324-337. Available: <http://search.proquest.com/docview/1781638616?accountid=10612> (Accessed 28 July 2021).
- Renko, S. & Popovic, D. 2015. 'Exploring the consumers' acceptance of electronic retailing using technology acceptance model'. *Portal of scientific journals of Croatia* (online), 29-41. Available: <https://core.ac.uk/reader/33279880> (Accessed 25 July 2017).
- Saunders, M. N. K., Lewis, P. & Thornhill, A. 2019. *Research methods for business students*. 8th ed. United Kingdom: Pearson.
- Schiffman, L. G. & Wisenblit, J. L. 2015. *Consumer behavior*. 11th ed. Cape Town: Pearson.
- Singh, R. 2019. 'Why do online grocery shoppers switch or stay? An exploratory analysis of consumers' response to online grocery shopping experience'. *International Journal of Retail & Distribution Management* (Online), 47(12): 1300-1317. Available: <https://www.emerald.com/insight/content/doi/10.1108/IJRDM-10-2018-0224/full/pdf?title=why-do-online-grocery-shoppers-switch-or-stay-an-exploratory-analysis-of-consumers-response-to-online-grocery-shopping-experience> (Accessed 28 July 2021).
- Svatosova, V. 2020. 'The Importance of Online Shopping Behavior in the Strategic Management of E-Commerce Competitiveness'. *Journal of competitiveness* (online), 12(4): 143-160. Available: https://www.researchgate.net/publication/348396995_The_Importance_of_Online_Shopping_Behavior_in_the_Strategic_Management_of_E-Commerce_Competitiveness (Accessed 08 October 2021).
- Sullivan, Y. W. & Kim, D. J. 2018. 'Assessing the effects of consumers' product evaluations and trust on repurchase intention in e-commerce environments'. *International Journal of Information Management*, 39(1), 199-219. (online) Available: <https://doi.org/10.1016/j.ijinfomgt.2017.12.008> (Accessed 14 October 2021).
- Usman, M. U. & Kumar, P. 2020. 'Factors Influencing Consumer Intention to Shop Online in Nigeria: A Conceptual Study'. *Vision Journal of Business Perspective* 1–8.
- Vasic, N., Kilibarda, M. & Kaurin, T. 2019. The Influence of Online Shopping Determinants on Customer Satisfaction in the Serbian Market. *Journal of Theoretical and Applied Electronic Commerce Research* (online), 14(2): 70-89. Available: <https://www.scielo.cl/pdf/jtaer/v14n2/0718-1876-jtaer-14-02-00107.pdf> (Accessed 18 September 2021).
- Walsh, G., Albrecht, K. A., Kunz, W. H. & Hofacker, C. 2015. 'Relationship between Online Retailers' Reputation and Product Returns: Retailers' Reputation and Product Returns'. *British Journal of Management* 27(1), 3-20 DOI:10.1111/1467-8551.12120 .
- Yee, C. C. & Yazdanifard, Y. 2014. 'How customer perception shape buying online decision'. *Global Journal of Management and Business Research: E Marketing* 14(2), 13-20.

Determinants of Impulsive Buying Behaviour in Social Commerce: A Stimulus–Organism–Response Framework Perspective

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ABSTRACT

Impulsive buying has been an area of interest in the marketing discipline for years. Impulsive buying behaviour has both positive and negative outcomes, in the sense that retailers usually exploit consumers' impulsiveness to increase their profits. However, these unplanned purchase decisions are problematic for consumers. Impulsive buying behaviour can disrupt consumers' financial stability and can have negative emotional effects on them. This type of buying behaviour also hinders consumers' ability to save, which may affect individuals' financial position. While impulsive buying behaviour has been extensively studied, not much research has been conducted on how it manifests in the context of social commerce in South Africa. As a result, the aim of this study is to identify and model elements that are important in understanding impulsive buying in social commerce. A quantitative method and a survey design were employed, and 297 responses were collected from South African consumers. The structural relationships in the proposed research model were tested using partial least squares structural equation modeling. The study found out that consumers' urge to buy impulsively is influenced by hedonic value, and impulsive buying behaviour is influenced by urge to buy impulsively. The findings of this study add to the body of knowledge by broadening our knowledge of how impulsive buying behaviour manifests in social commerce, especially in the setting of South Africa.

Keywords: impulsive buying behaviour; social commerce; social media usage intensity; social media browsing; urge to buy impulsively; hedonic value

INTRODUCTION

For a long time, impulsive buying has garnered considerable attention in marketing literature (Amos, Holmes & Keneson, 2014; Chang, Yan & Eckman, 2014; Chen, Su & Widjaja, 2016; Chinomona & Montso, 2019). It is considered as a purchase made without prior preparation or thought after being exposed to certain stimuli (Hashmi, Attiq & Rasheed, 2019). Since 68 percent of online purchases are made on impulse (Li & Wang, 2015, as cited in Xi et al., 2016), retailers and marketers have begun to pay greater attention to this behaviour, which generates a large amount of revenue for them (Chinomona & Montso, 2019). The use of social media tools and users' online social networks (OSNs) to enable the purchasing and selling of products and services is referred to as social commerce (s-commerce) (Wang & Xie, 2020; Wang & Zhang, 2012). Xi et al. (2016) suggest that these activities involve users' electronic word-of-mouth exchange, collaborative shopping, and social interaction. The advantage of s-commerce, according to Xi et al. (2016), is that it benefits both businesses and customers in a variety of ways. To begin with,

it assists organisations in engaging clients with their brands based on their social behaviours. Second, it gives consumers a reason to visit the organisation's website again. Third, the organisation's website gives customers a place to discuss the company's brand. Finally, it gives consumers with all the information they need to investigate, compare, and ultimately choose one brand over another (Xi et al., 2016).

Consumers have shown impulsive purchase behaviour on social media networks in recent years, prompting a new research phenomenon known as s-commerce impulsive buying. Consumers' inability to manage purchase urges when confronted with consumptive stimuli on social media is described as the s-commerce impulsive buying (Lo, Lin & Hsu, 2016). Impulsive purchasing behaviour in s-commerce differs from that in traditional retailers. To stimulate a desire to buy in a physical store, for example, stimuli can be adjusted to affect the five senses, namely vision, hearing, touch, smell, and taste. Stimuli in an s-commerce environment are limited to those that affect vision and hearing (Lo et al., 2016). As a result, it is fascinating to investigate the aspects of online store design that elicit online impulsive buying by increasing consumers' urge to buy or weakening their self-control. Existing studies have investigated how numerous aspects associated to information systems artefacts influence online impulse buying within an e-commerce context, such as system design (Shen & Khalife, 2012), website quality (Hashmi et al., 2019; Turkyilmaz, Erdem & Uslu, 2015), website attributes (Liu, Li & Hu, 2013) and website ease of navigation (Lin & Lo, 2016). However, few empirical research has explored online impulse buying in an s-commerce setting in South Africa, and as a result, little is known about how it manifests in this country. For this reason, the objective of this study is to use the stimulus–organism–response model as a theoretical lens to study the determinants of impulsive buying behaviour in s-commerce.

PROBLEM STATEMENT

It has become clear that s-commerce has created a new possibility for customers to buy impulsively since it offers them with more access to a wider choice of products and makes transactions more convenient (Strack, Werth & Deutsch, 2006). In s-commerce, impulsive buying behaviour is problematic since it makes it easier for consumers to buy products they don't need and for them to spend recklessly (Akram et al., 2016; Aragoncillo & Ors, 2018; Strack et al., 2006). This behaviour becomes extremely difficult to stop, and it eventually has negative repercussions. Financially, reckless spending prevents consumers from making good and lasting financial decisions and causes consumers to end up with a significant and unmanageable amount of debt (Chamorro-Premuzic, 2015). Other consequences of reckless spending are consumer bankruptcies, major life crises and poverty (Chamorro-Premuzic, 2015). Psychologically, impulsive buying behaviour could cause consumers to develop compulsive buying tendencies (Chamorro-Premuzic, 2015; Chow, 2019). Compulsive buying is defined as a state of chronic, repetitive purchasing that develops as a primary response to a variety of events or feelings, the majority of which are unpleasant (Chow, 2019). This could have negative repercussions like dependency and behavioural addictions. As such, the main aim of this study is to investigate the determinants of impulsive buying behaviour in s-commerce.

LITERATURE REVIEW

Overview of impulsive buying in social commerce

With the Internet developing rapidly and mobile devices, such as smartphones, tablets, laptops, and computers, constantly being improved and innovated, s-commerce has proliferated (Wang & Xie, 2020; Wu & Ye, 2013). S-commerce is the use of social media tools to support e-commerce (Xi et al., 2016). It is also a new type of e-commerce that uses social media, online media, and other communication channels in the context of social media to facilitate interpersonal relationships and business information flow interaction, as well as the purchase and sale of goods and services through social interaction and user-generated content (Wang & Xie, 2020). Both these definitions highlight using social media to conduct business transactions. Therefore, with the rise of s-commerce, researchers have identified that impulse buying is also a factor in consumers' social media activities (Chan, Cheung & Lee, 2017; Xiang et al., 2016). It is becoming evident that with the presence of retail stores in the space of s-commerce, impulse buying behaviour among consumers is becoming widespread. Consumers who shop on e-commerce

platforms are relieved from the constraints they might face in traditional stores, increasing their likelihood of making impulsive purchases (Chan et al., 2017). Many elements, according to the existing literature, influence s-commerce impulse buying, including the shopping environment, consumers' personal attributes, the product itself, and various demographic and sociocultural aspects (Aragoncillo & Ors, 2018; Muruganantham & Bhakat, 2013; Xiang et al., 2016). The theoretical perspective that underpins this study will be briefly described in the subsequent section.

Underlying theory

The Stimulus–Organism–Response (S-O-R) framework, pioneered by Mehrabian and Russell (1973) and modified by Jacoby (2002), provides a starting point for this study (2002). The S-O-R framework adds an organism to the Stimulus Response (SR) hypothesis, explaining an individual's internal reactions in response to situational inputs (s-commerce, for the purposes of this study). According to the S-O-R framework, situational cues (stimuli) create internal reactions (organism), which then affect an individual's behaviour or response (Chan et al., 2017). This theory is one of the most used theories in explaining online impulse buying behaviour (Chan et al., 2017; Chang, 2017; Hashmi et al., 2019; Lim, Lee & Kim, 2017; Luqman et al., 2017). The theory has three main components: (1) a stimulus (S), which is a trigger that arouses the consumer (Eroglu, Machleit, & Davis, 2001), (2) an organism (O), which is the consumer's internal evaluation (Loureiro & Ribeiro, 2011), and (3) a response, which is the outcome of the consumer's reactions to their internal evaluation (Donovan & Rossiter, 1982). Studies that have applied the S-O-R framework to online impulse buying include Parboteeah, Valacich and Wells (2009), Liu et al. (2013), Jiang et al. (2010) and Hsu and Tsou (2011). The S-O-R framework is considered the most appropriate theoretical lens to underpin this study, since the determinants investigated (namely, social media usage intensity, social media browsing, and hedonic value) can arguably be regarded as situational cues that cause an individual's reactions, namely, the urge to buy impulsively and, as a result, impulsive buying behaviour in s-commerce.

RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

Social media browsing

Social media browsing is considered the initial phase of engaging in s-commerce buying, as it signifies the consumer's search for information. Consumers browse social media because they enjoy seeking information, regardless of whether they purchase anything. Browsing can also be regarded of as an exploratory search activity that is undirected, less targeted, and stimulus driven (Leong, Jaafar & Ainin, 2018; Zhang et al., 2018). Because browsing takes time, the likelihood that consumers will feel compelled to make an impulsive purchase grows as they browse (Zhang et al., 2018). The existing literature on consumer behaviour indicates that utilitarian drivers and hedonic drivers are predictors of people's browsing behaviour (Adi, Wihuda & Adawiyah, 2017). Individuals who browse for utilitarian purposes seek to get product information to make a purchasing decision (Adi et al., 2017; Hashmi et al., 2019; Zhang et al., 2018), while hedonic browsers gather product information just because they enjoy gathering information, with no future purchase in mind (Adi et al., 2017; Hashmi et al., 2019; Zhang et al., 2018). Social media browsing will therefore be considered one of the key determinants of impulsive buying behaviour in s-commerce.

Social media usage intensity

Basically, the frequency with which a consumer browses through social media platforms is referred to as social media usage intensity (Leong et al., 2018). This conceptualisation, however, is incomplete, as it does not include social media activity and engagement. A more appropriate definition suggests that social media usage intensity encompasses a user's actual activity, meaning the extent to which the user actively engages in social media activities (Wirtz, Göttel & Daiser, 2017). Users show active engagement in social networks by the number of friends they have and their average use per day (Wirtz et al., 2017). Focusing solely on the overall time a user spends browsing on social networks misses the point when attempting to find out what motivates social media usage intensity or how usage intensity leads consumers to purchase impulsively on social media (Leong et al., 2018; Smock et al., 2011). As according to previous research (Gonzales & Hancock, 2011), social media can increase a user's self-esteem, and the

greater the user's self-esteem because of social media usage intensity, the lower the individual's self-control, leading to more impulsive behaviour (Leong et al., 2018; Wilcox & Stephen, 2013). It is also suggested that the higher a user's usage intensity, the higher the possibility will be that they will develop an urge to purchase on social networks (Leong et al., 2018). Accordingly, in this study, usage intensity is theorised to be one of the determinants of impulsive buying behaviour in s-commerce.

Hedonic value

Hedonic value, according to existing research, increases impulsive buying and customer satisfaction (Hashmi et al., 2019; Xiang et al., 2016). Hedonic value, in general, refers to the pleasure consumers derive from buying (Asnawati, 2018). Hedonic value is also regarded a motivation for shopping because shopping is such a pleasurable experience that it causes the consumer to ignore the benefits of the purchased item (Asnawati, 2018; Hashmi et al., 2019). Adventure shopping, gratification/relaxation shopping, value shopping, social shopping, and idea shopping are the five key features of hedonic value (Asnawati, 2018). Hedonic value causes impulsive buying in the sense that consumers tend to behave impulsively when they experience hedonic value aspects such as self-satisfaction, enjoyment, fantasy, and social and emotional satisfaction (Wahab et al., 2018). Furthermore, because of the ease and convenience of exploring, purchasing, and paying for products in s-commerce contexts, purchase decisions driven by hedonic motive are more common (Wahab et al., 2018). As a result, hedonic value is also theorised as one of the determinants of impulsive buying behaviour in s-commerce in this study.

Urge to buy impulsively

An urge to buy impulsively is defined as a state of desire experienced when encountering a product in a certain setting (Chung, Song & Lee, 2017; Leong et al., 2018). This desire is sudden and spontaneous, and it occurs before the actual impulsive buying (Huang, 2016; Leong et al., 2018). The urge to buy impulsively has been extensively studied in the literature, with some studies suggesting that perceived enjoyment and impulse-buying tendency influence the urge to buy impulsively (Xiang et al., 2016), while others have theorised that the urge to buy impulsively influences actual impulse buying behaviour (Leong et al., 2018). The nexus of urge to buy and actual impulsive buying behaviour occurs when the consumer's own thoughts are considered to trigger an urge to buy, and once triggered, this urge becomes so powerful and persistent that it demands immediate action (Badgaiyan & Verma, 2015). The hypothesis that urges to buy impulsively has an influence on actual impulse purchasing is well documented in the literature (Huang, 2016; Leong et al., 2018). The literature indicates that the higher the urge to buy, the higher the tendency will be to engage in impulsive buying (Chung et al., 2017; Leong et al., 2018). Accordingly, based on the preceding literature, we theorise urge to buy impulsively as a proximal determinant of impulsive buying behavior in s-commerce.

Impulsive buying behaviour

After being exposed to certain stimuli, impulsive buying is defined as purchasing decisions made without consideration or contemplation (Farid & Ali, 2018; Hashmi et al., 2019). Impulsive buying decisions are characterised by a subjective bias in favour of instant possession and a relatively quick decision-making process (Hejase et al., 2018). There are four categories of impulsive buying behaviour that are commonly discussed in the literature, namely pure impulse buying, reminder impulse buying, suggestion impulse buying and planned impulse buying (Park, Kim & Forney, 2017; Zhang et al., 2018). Pure impulse buying is the act of making impulsive purchases for the sake of novelty or escape. While reminder impulsive buying occurs when a customer sees an item advertised and remembers that their stock of the item at home is depleted or low, they are prompted to make an impulsive purchase. Suggestion impulse buying occurs when a customer sees a product and visualises a need for it, even if they have no prior knowledge of the product. Planned impulsive buying occurs when a customer plans a specific purchase in advance, but focuses on promotions or discounts, this is known as (Park et al., 2017; Zhang et al., 2018). In this study, impulsive buying behaviour is operationalised as an outcome variable. In line with the above discussion, the research model is presented in Figure 1, followed by the proposed hypothesis statements.

FIGURE 1
THE HYPOTHETIC RESEARCH MODEL

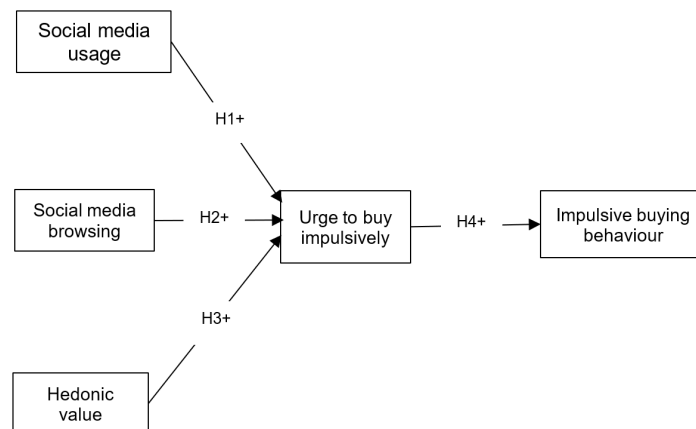


Figure 1 above represents the research model of this study. Three independent variables, namely social media usage intensity, social media browsing and hedonic value (which are situational cues), are theorised to influence impulsive buying behaviour (regarded as a response to internal reactions), through urge to buy impulsively (which is regarded as an individual's internal reactions, which affect their behaviour). The proposed hypothesis statements are as follows:

H₁: Social media usage intensity is positively related to urge to purchase impulsively.

H₂: Social media browsing is positively related to urge to purchase impulsively.

H₃: Hedonic value is positively related to urge to purchase impulsively.

H₄: Urge to purchase impulsively is positively related to impulsive buying.

RESEARCH METHODOLOGY

Target population, sampling, and the measuring instrument

The target population of this study was social media users in Matjhabeng Local Municipality who have bought products through social media. The sample size was calculated using the Raosoft sample size calculator, with the margin of error set at 5% and the confidence interval set at 90%; thus, the recommended sample size was 267. This study used convenience non-probability sampling since there was no readily available sample frame. This means that the sample was drawn from members of the population who are conveniently available to the researcher (Wiid & Diggins, 2015). Trained field workers were deployed to designated malls where the survey took place, and the respondents were selected based on their willingness to cooperate with the field workers. The data was collected using a self-administered questionnaire and a quantitative approach with a survey study design. The questionnaire was divided into two sections. The first section solicited demographic information from responders, while the second section contained five-point Likert-scale questions. In the second section of the questionnaire, respondents were asked to indicate their level of agreement or disagreement with several statement measuring the five constructs under investigation in this study. The constructs were measured using a five-point Likert scale, where the value 1 corresponding to "strongly disagree" and value 5 corresponding to "strongly agree." The measuring items for the questionnaire were adapted from the existing literature (Beatty, & Ferrell, 1998; Ellison, Steinfield, & Lampe, 2007; Leong et al., 2018; Wu et al., 2016). The next section explains the data analysis strategy.

Data analysis

Structural equation modelling with PLS-SEM (SmartPLS version 3.2.8) was used as the main data analysis technique in this study. PLS-SEM was selected because its algorithm follows a prediction modelling perspective, such that the method aims to maximise the amount of explained variance of the endogenous latent variables. The method therefore supports prediction-oriented goals, such as explaining or predicting the target constructs in a model, which

was the case in this study (Hair, Ringle & Sarstedt, 2011). The procedure for data analysis followed a two-step approach, namely assessment of the measurement model, and assessment of the structural model (Chin, 2010). In assessing the measurement model, we used the four sequential steps proposed by Hair et al. (2019), namely (1) confirming the item reliability, by evaluating the outer loadings of each item, (2) assessing the internal consistency reliability of the items, using the index for composite reliability and the Cronbach's alpha, (3) assessing the convergent validity of each construct measure, using the average variance extracted (AVE) criterion, and (4) assessing the discriminant validity, using the heterotrait–monotrait (HTMT) ratio of the correlations. Since PLS-SEM is the choice of analysis technique, the structural model will be evaluated by means of the coefficient of determination (R^2) and the standardised path coefficient (β). The results of the analysis are presented in the following section.

RESEARCH FINDINGS

Demographic profile of the respondents

The descriptive statistics of the respondents are presented in Table 1.

TABLE 1
DESCRIPTIVE STATISTICS
OF THE RESPONDENTS

Demographic		Count	Percent
Gender	Males	123	41.41
	Females	174	58.59
	Total	297	100.00
Age	18–25	72	24.24
	25–35	133	44.78
	35–40	61	20.54
	40 and older	29	9.76
	Not answered	2	0.67
	Total	297.00	99.99
Education completed	None	3	1.01
	Primary school	1	0.34
	Secondary school	56	18.86
	College or university (graduate)	146	49.16
	Postgraduate	87	29.29
	Not answered	4	1.35
	Total	297	100.01
Marital status	Single	206	69.36
	Married	78	26.26
	Divorced	8	2.69
	Widowed	4	1.35
	Not answered	1	0.34
	Total	297	100.00
Monthly income	Under R7 500	118	39.73
	R7 501–R12 000	46	15.49
	R12 001–R18 000	45	15.15
	R18 001–R27 000	43	14.48
	R27 001 and more	38	12.79
	Not answered	7	2.36
	Total	297	100.00

Note: A total percentage exceeding or lower than 100.00% is due to rounding off.

The statistics in Table 1 show that the sample of 297 respondents comprised 41.41% males and 58.59% females. Most of the respondents, that is, 133 respondents, or 44.78% of respondents, were 25 to 35 years of age. Regarding education completed, 49.16% of respondents had obtained a graduate degree from a college or a university, while 29.29% had obtained a postgraduate degree. Thus, collectively, about 78% of respondents had completed tertiary education. Of the 297 respondents, about 70% were single, 26.26% were married, 2.69% were divorced, and four respondents were widowed. Lastly, 39.73% of respondents earned R7 500 or less per month, followed by 15.49% who earned R7 501 to R12 000 per month, and 15.15% who earned R12 001 to R18 000 per month. Collectively, 27.27% of respondents earned more than R18 000 per month.

The measurement model results

Hair et al., (2019) recommended four consecutive steps for evaluating the measurement model, which we followed (2019). Firstly, we confirmed item reliability, by evaluating the outer loadings of each item. For acceptable item reliability, the outer loading should be 0.708 or higher, and the outer loading should also be statistically significant. Secondly, we assessed the internal consistency reliability of the items, using the index for composite reliability and the Cronbach's alpha. A satisfactory value for each index is expected to be 0.7 or higher. Thirdly we step assessed the convergent validity of each construct measure, using the average variance extracted (AVE) criterion. An acceptable AVE is 0.50 or higher. Finally, we assessed the discriminant validity, using the heterotrait–monotrait (HTMT) ratio of the correlations. An HTMT value of higher than 0.85

would be an indication of a lack of discriminant validity between two constructs. The results of the measurement model are presented in Table 3 and Table 4, respectively.

TABLE 2
MEASUREMENT MODEL

Construct	Item	Outer loading	p-value (two-tailed)	Cronbach's alpha	CR	AVE
Hedonic value	HV1	0.789	0.000	0.837	0.880	0.550
	HV2	0.737	0.000			
	HV3	0.733	0.000			
	HV4	0.816	0.000			
	HV5	0.689	0.000			
	HV6	0.677	0.000			
Impulsive buying behaviour	IBB1	0.818	0.000	0.878	0.917	0.733
	IBB2	0.892	0.000			
	IBB3	0.863	0.000			
	IBB4	0.852	0.000			
Social media browsing	SMB1	0.609	0.000	0.550	0.750	0.504
	SMB2	0.695	0.000			
	SMB4	0.811	0.000			
Social media usage intensity	SUI1	0.745	0.000	0.873	0.901	0.604
	SUI2	0.786	0.000			
	SUI3	0.811	0.000			
	SUI4	0.783	0.000			
	SUI5	0.814	0.000			
	SUI6	0.722	0.000			
Urge to buy impulsively	UBI1	0.614	0.000	0.864	0.895	0.517
	UBI2	0.740	0.000			
	UBI3	0.796	0.000			
	UBI4	0.756	0.000			
	UBI5	0.780	0.000			
	UBI6	0.745	0.000			
	UBI7	0.583	0.000			
	UBI8	0.583	0.000			
	UBI9	0.710	0.000			

The initial measurement results revealed that seven of the outer loadings did not meet the 0.708 criterion for item reliability. However, all the outer loadings were statistically significant, with a p-value of less than 0.001. Hair, Hult, Ringle and Sarstedt (2017) note that outer loadings less than 0.7 but not lower than 0.4 can be retained in a measurement model if these outer loadings do not result in the internal reliability consistency being less than the 0.7 cut-off value or an AVE of less than 0.5. The AVEs of two of the constructs, namely social media browsing and urge to buy impulsively, were less than 0.5. The items SMB3 and UBI8 were eliminated from the measurement model to increase the AVE of each construct to more than 0.5. Consequently, the results of the modified and final measurement model in Table 2 show that all the outer loadings are above 0.4 and are statistically significant. In addition, the internal consistency reliability and the AVE of each construct are above 0.7 and 0.5, respectively. The HTMT results to confirm discriminant validity are presented in Table 3.

TABLE 3
HTMT RESULTS

Construct	SMB	UBI	HV	IBB
Urge to buy impulsively (UBI)	0.525			
Hedonic value (HV)	0.690	0.702		
Impulsive buying behaviour (IBB)	0.342	0.815	0.641	
Social media usage intensity (SUI)	0.831	0.343	0.416	0.303

The results in Table 3 show that each ratio is less than 0.85. This thus provides evidence that each construct in the model is a unique construct as reported in the HTMT ratios. Consequently, the researchers can infer that the measurement model used in this study has adequate reliability and validity to allow them to proceed with the structural model and hypothesis testing.

The structural model results and the hypothesis testing

The coefficient of determination (R^2) and the standardised path coefficient (β) were used to assess the structural model. The R^2 indicates how much variance is explained in each of the endogenous constructs. As a result, it is regarded as a metric to assess the model's explanatory power. For this reason, values of 0.25, 0.50, and 0.75 represent weak, moderate, and high predictive accuracy, respectively. The standardised path coefficient represents the hypothesized relationships between the constructs, and R^2 . In SmartPLS, we employed bootstrapping of 5 000 samples to test the structural model. The structural model results are depicted in Figure 2, and this is elaborated through the hypothesis testing in Table 4.

FIGURE 2
THE STRUCTURAL MODEL

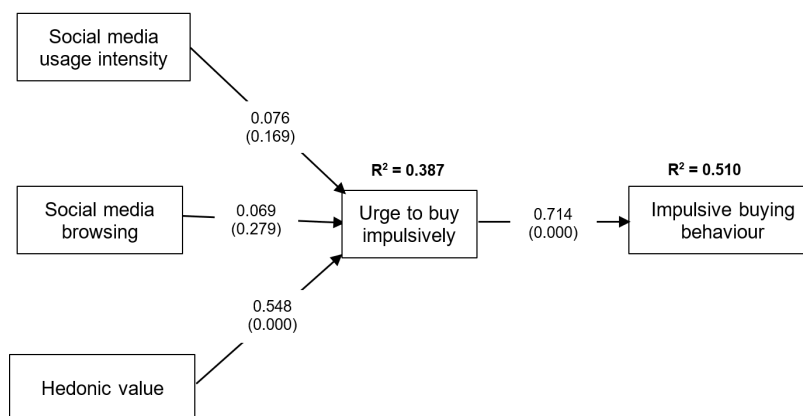


TABLE 4
STRUCTURAL RELATIONSHIPS AND HYPOTHESIS DECISIONS

	Path coefficient	p-value (two-tailed)	95% BCCI		Hypothesis decision
			2.50%	97.50%	
Social media browsing → urge to buy impulsively.	0.069	0.279	-0.055	0.194	Not Supported
Urge to buy impulsively → impulsive buying behaviour.	0.714	0.000	0.645	0.767	Supported
Hedonic value → urge to buy impulsively.	0.548	0.000	0.442	0.650	Supported
Social media usage intensity → urge to buy impulsively.	0.076	0.169	-0.041	0.178	Not Supported

The structural model results in Figure 2 and further elaborated in Table 4 show that only hedonic value influences respondents' urge to buy impulsively ($\beta=0.548$, $p=0.000$ [two-tailed]). The results further show that urge to buy impulsively has a significant influence on impulsive buying behaviour ($\beta=0.714$, $p=0.000$ [two-tailed]). Figure 2 also demonstrates that the in-sample predictive accuracy of the research model tested in this study is acceptable. The R^2 of urge to buy impulsively is 0.387, which means that the predictors (social media usage intensity, social media browsing and hedonic value) explain up to 38.7% of the variance in urge to buy impulsively, while the R^2 of impulsive buying behaviour is 0.510, which means that urge to buy impulsively explains up to 51% of the variance in impulsive buying behaviour.

DISCUSSION

The overarching aim of this study was to investigate the determinants of impulsive buying behaviour in s-commerce. The findings of the study show that two of the hypotheses that we initially posited have empirical support, while two unexpectedly are not supported. The first hypothesis stated that social media usage intensity is positively related to urge to purchase impulsively. Contrary to our theorisation, the results revealed that social media usage intensity

does not influence urge to buy impulsively ($\beta=0.069$, $p=0.279$). Therefore, HO1 is not supported. This is surprising, because our assumption is that the more time spent on a social network, i.e., the higher the usage intensity, the greater the urge to make impulsive purchases. This is premised on the belief that a higher usage intensity of social media exposes the consumer to more s-commerce activities, which may trigger their urge to buy impulsively. This finding contradicts previous research. For instance, in a Malaysian context, Leong et al. (2018) found that Facebook commerce usage intensity had a statistically significant positive effect on urge to buy impulsively. Our claim that when social media usage intensity is high, consumers' urge to buy impulsively is similarly high is supported by the literature (Leong et al., 2018).

The second hypothesis stated that social media browsing is related to the urge to buy impulsively. The result showed that, contrary to our hypothesis, social media browsing has no effect on urge to buy impulsively ($\beta=0.069$, $p=0.279$). Therefore, HO2 is not supported. This finding likewise contradicts previous studies. For instance, research conducted by Leong et al. (2018) and Zhang et al. (2018) found that browsing had a statistically significant positive effect on urge to buy impulsively. Our theorisation on the relationship between social media browsing and urge to purchase impulsively was therefore not made arbitrarily, but rather was grounded on existing literature, which maintains that social media browsing takes time, and therefore the possibility that consumers may experience the urge to purchase impulsively in the process of browsing increases the more they browse a given social network (Zhang et al., 2018).

The third hypothesis stated that hedonic value is positively related to urge to purchase impulsively. The findings indicate that hedonic value has a positive influence on urge to buy impulsively ($\beta=0.548$, $p=0.000$), confirming our hypothesis. Therefore, HO3 is supported. This result is consistent with previous studies. For instance, in the Korean restaurant industry, Chung et al. (2017) found that hedonic shopping value is instrumental in shaping consumers' urge to buy impulsively. Similarly, research conducted in Saudi Arabia suggests that s-commerce users find it interesting and entertaining, resulting in favourable feelings and thereby influencing online purchase intentions (Sheikh et al., 2017). While there is a paucity of studies on s-commerce in South Africa, previous research on the appeal of the online service-scape to customers, with a focus on hedonic buyers, has discovered that customers' level of hedonic shopping experience strongly influences commitment to online retailers (Mpiganjira, 2015). As a result, it is concluded that hedonic value is an important predictor of the urge to make impulsive purchases.

The fourth hypothesis stated that urge to buy impulsively is positively related to impulsive buying. The findings revealed that impulsive buying behaviour is strongly influenced by urge to buy impulsively ($\beta=0.714$, $p=0.000$). This confirms our proposition, and HO4 is therefore supported. This suggests that our argument that the stronger the urge, the more likely one is to buy impulsively is empirically supported. This result is also consistent with existing studies. Research conducted in China and Malaysia, for example, discovered that urge to buy impulsively has a considerable impact on impulse buying behaviour (Badgaiyan & Verma, 2015; Leong et al., 2018). As a result, it is concluded for the purposes of this study that urge to buy impulsively is a key determinant of impulsive buying in s-commerce.

CONTRIBUTION AND LIMITATIONS

The determinants of impulsive buying behavior in s-commerce were investigated in this study. The findings of the study have both theoretical and practical relevance. From a theoretical standpoint, we suppose this is one of the first studies in South Africa to investigate the determinants of impulsive buying behaviour in s-commerce. Thus, the study contributes new knowledge and can serve as a baseline for future research in this emerging form of retail, that is, s-commerce. The practical contribution of this study is that its findings can be used by South African retailers who already have or are planning to have a presence in s-commerce retailing to understand how impulsive buying manifests in s-commerce. The new knowledge could be useful for retailers to frame appropriate strategies that are geared towards improving their social media sites to trigger more enjoyment for users. This is because the study found that hedonic value has a positive significant influence on urge to buy impulsively. While this work makes a considerable contribution, it is not without limitations. The major limitation is the scope of the study, as the research setting was limited to the Free State province, and that the sample was drawn using the non-probability sampling method. This limits the generalisability of the findings to the entire population of s-commerce shoppers in South Africa. As a result, it is suggested that additional research be undertaken across the country.

REFERENCES

- Adi, P.H., Wihuda, F. & Adawiyah, W.R. 2017. 'The role of social media browsing intention for behavioral outcomes of young consumers', *Market-Tržište*, 29(1): 39-57.
- Akram, U., Hui, P., Khan, M.K., Hashim, M. & Rasheed, S. 2016. 'Impact of store atmosphere on impulse buying behaviour: Moderating effect of demographic variables', *International Journal of u- and e-Service, Science and Technology*, 9(7): 43-60.
- Amos, C., Holmes, G.R. & Keneson, W.C. 2014. 'A meta-analysis of consumer impulse buying', *Journal of Retailing and Consumer Services*, 21(2): 86-97.
- Aragoncillo, L. & Orús, C. 2018. 'Impulse buying behaviour: An online-offline comparative and the impact of social media', *Spanish Journal of Marketing – ESIC*, 22(1): 42-62.
- Asnawati, W.S. 2018. 'The influence of hedonic shopping motivation to the impulse buying of online-shopping consumer on Instagram', *RJOAS*, 2(74): 99-107.
- Badgaiyan, J.A. & Verma, A. 2015. 'Does urge to buy impulsively differ from impulsive buying behaviour? Assessing the impact of situational factors', *Journal of Retailing and Consumer Services*, 22(1): 145-157.
- Beatty, S.E., & Ferrell, E.M. (1998). Impulse buying: modeling its precursors. *Journal of Retailing*, 74(2): 169-191.
- Chamorro-Premuzic, T. 2015. The psychology of impulsive shopping. *The Guardian*, 26 November. [Online] Available from: <https://www.theguardian.com/media-network/2015/nov/26/psychology-impulsive-shopping-christmas-black-friday-sales> [Accessed 3 June 2020].
- Chan, T.K.H., Cheung, C.M.K. & Lee, Z.W.Y. 2017. 'The state of online impulse-buying research: A literature analysis', *Information & Management*, 54(2): 204-217.
- Chang, H.J., Yan, R.-N. & Eckman, M. 2014. 'Moderating effects of situational characteristics on impulse buying', *International Journal of Retail & Distribution Management*, 42(4): 298-314.
- Chang, Y. 2017. 'The influence of media multitasking on the impulse to buy: A moderated mediation model', *Computers in Human Behavior*, 70(1): 60-66.
- Chen, J.V., Su, B.-C. & Widjaja, A.E. 2016. 'Facebook C2C social commerce: A study of online impulse buying', *Decision Support Systems*, 83(1): 57-69.
- Chin, W.W. 2010. How to use and report PLS analysis in Esposito, V.V., Chin, W.W., Henseler, J. and Wang, H. (Eds), *Handbook of partial least squares: Concepts, methods and applications in marketing and related fields*, Berlin: Springer: 655-690.
- Chinomona, E. & Montso, M.E. 2019. 'Modelling the drivers of impulsive buying behaviour: A case of South Africa', *Journal of Economics and Behavioral Studies*, 11(1): 27-38.
- Chow, W.H. 2019. Investigating the determinants of compulsive buying behavior. MBA thesis, Tunku Abdul Rahman University College, Kuala Lumpur.
- Chung, N., Song, H.G. & Lee, H. 2017. 'Consumers' impulsive buying behavior of restaurant products in social commerce', *International Journal of Contemporary Hospitality Management*, 29(2): 709-731.
- Donovan, R.J. & Rossiter, J.R. 1982. 'Store atmosphere: An environmental psychology approach', *Journal of Retailing*, 58(1): 34-57.
- Ellison, N., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "Friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4): 1143-1168.
- Eroglu, S.A., Machleit, K.A. & Davis, L.M. 2001. 'Atmospheric qualities of online retailing: A conceptual model and implications', *Journal of Business Research*, 54(2): 177-184.
- Farid, D.S. & Ali, M. 2018. Effects of personality on impulsive buying behavior: Evidence from a developing country. Munich Personal RePEc Archive. [Online] Available from: https://mpra.ub.uni-muenchen.de/87401/1/MPRA_paper_87401.pdf [Accessed 3 June 2020].

- Gonzales, A.L. & Hancock, J.T. 2011. 'Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem', *Cyberpsychology, Behavior, and Social Networking*, 14(1-2): 79-83.
- Hair, J.F., Hult, G.T.M., Ringle, C.M. & Sarstedt, M. 2017. *A primer on partial least squares structural equation modeling (PLS-SEM)*. 2nd ed. Thousand Oaks, CA: Sage.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M. & Thiele, K.O. 2017. 'Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods', *Journal of the Academy of Marketing Science*, 45(5): 616-632.
- Hair, J.F., Ringle, C.M. & Sarstedt, M. 2011. 'PLS-SEM: Indeed a Silver Bullet', *Journal of Marketing Theory and Practice*, 19(2): 139-152.
- Hair, J.F., Risher, J.J., Sarstedt, M. & Ringle, C.M. 2019. 'When to use and how to report the results of PLS-SEM', *European Business Review*, 31(1): 2-24.
- Hashmi, H., Attiq, S. & Rasheed, F. 2019. 'Factors affecting online impulsive buying behavior: A stimulus organism response model approach', *Market Forces*, 14(1): 19-42.
- Hejase, H.J., Skaff, Y., Skaff, D.E. & Hejase, A.J. 2018. 'Effect of education and emotional intelligence on consumers' impulsive buying behavior', *International Review of Management and Business Research*, 7(3): 732-757.
- Hsu, H.-Y. & Tsou, H.T. 2011. The effect of website quality on consumer emotional states and repurchases intention. *African Journal of Business Management*, 5(15): 6195-6200.
- Huang, L.-T. 2016. Flow and social capital theory in online impulse buying. *Journal of Business Research*, 69(6): 2277-2283.
- Jacoby, J. 2002. 'Stimulus-organism-response reconsidered: An evolutionary step in modeling (consumer) behavior', *Journal of Consumer Psychology*, 12(1): 51-57.
- Jiang, Z., Chan, J., Tan, B.C.Y. & Chua, W.S. 2010. 'Effects of interactivity on website involvement and purchase intention', *Journal of the Association for Information Systems*, 11(1): 34-59.
- Leong, L.-Y., Jaafar, N.I. & Ainin, S. 2018. 'The effects of Facebook browsing and usage intensity on impulse purchase in f-commerce', *Computers in Human Behavior*, 78(1): 160-173.
- Lim, S.H., Lee, S. & Kim, D.J. 2017. 'Is online consumers' impulsive buying beneficial for e-commerce companies? An empirical investigation of online consumers' past impulsive buying behaviors', *Information Systems Management*, 34(1): 85-100.
- Lin, S.-W. & Lo, L.Y.-S. 2016. 'Evoking online consumer impulse buying through virtual layout schemes', *Behavior & Information Technology*, 35(1): 38-56.
- Liu, Y., Li, H. & Hu, F. 2013. 'Websites attributes in urging online impulse purchase: An empirical investigation on consumer perceptions', *Decision Support Systems*, 55(3): 829-837.
- Lo, L.Y.-S., Lin, S.-W. & Hsu, L.-Y. 2016. 'Motivation for online impulse buying: A two-factor theory perspective', *International Journal of Information Management*, 36(5): 759-772.
- Loureiro, S.M.C. & Ribeiro, L. 2011. 'The effect of atmosphere on emotions and online shopping intention: Age differentiation', In: *Australian and New Zealand Marketing Academy Conference*. Perth, Australia.
- Luqman, A., Cao, X., Ali, A., Masood, A. & Yu, L. 2017. 'Empirical investigation of Facebook discontinues usage intentions based on SOR paradigm', *Computers in Human Behavior*, 70(1): 544-555.
- Mehrabian, A. & Russell, J.A. 1973. 'A measure of arousal seeking tendency', *Environment and Behavior*, 5(3): 315-333.
- Mpinganjira, M. 2015. 'Using online service-scape to appeal to customers: A focus on hedonic shoppers' *The Retail and Marketing Review*, 11(1): 61-75.
- Muruganantham, G. & Bhakat, R. 2013. 'A review of impulse buying behavior', *International Journal of Marketing Studies*, 5(3): 149-160.
- Parboteeah, D.V., Valacich, J.S. & Wells, J.D. 2009. 'The influence of website characteristics on a consumer's urge to buy impulsively', *Information Systems Research*, 20(1): 60-78.

- Park, E.J., Kim, E.Y. & Forney, J.C. 2017. 'A structural model of fashion-oriented impulsive buying behavior', *Journal of Marketing*, 10(4): 433-446.
- Sheikh, Z., Islam, T., Rana, S., Hameed, Z. & Saeed, U. 2017. 'Acceptance of social commerce framework in Saudi Arabia', *Telematics and Informatics*, 34(8): 1693-1708.
- Shen, K. & Khalife, M. 2012. 'System design effects on online impulse buying', *Internet Research*, 22(4): 396-425.
- Smock, A.D., Ellison, N.B., Lampe, C. & Wohn, D.Y. 2011. 'Facebook as a toolkit: A uses and gratification approach to unbundling feature use', *Computers in Human Behavior*, 27(6): 2322-2329.
- Strack, F., Werth, L. & Deutsch, R. 2006. 'Reflective and impulsive determinants of consumer behavior', *Journal of Consumer Psychology*, 16(3): 205-216.
- Turkylmaz, C.A., Erdem, S. & Uslu, A. 2015. 'The effects of personality traits and website quality on online impulse buying', *Procedia - Social and Behavioral Sciences*, 175: 98-105.
- Wahab, Z., Shihab, M.S., Hanafi, A. & Mavilinda, H.F. 2018. 'The influence of online shopping motivation and product browsing toward impulsive buying of fashion products on a social commerce', *Jurnal Manajemen Motivasi*, 14(1): 32-40.
- Wang, C. & Zhang, P. 2012. 'The evolution of social commerce: An examination from the people, business, technology, and information perspective', *Communications of the Association for Information Systems*, 31(5): 105-127.
- Wang, H. & Xie, J. 2020. 'A review of social commerce research', *American Journal of Industrial and Business Management*, 10(1): 793-803.
- Wiid, J. & Diggins, C. (2015). *Marketing Research*. 3rd edition. Cape Town, South Africa. Juta.
- Wilcox, K. & Stephen, A.T. 2013. 'Are close friends the enemy? Online social networks, self-esteem, and self-control', *Journal of Consumer Research*, 40(1): 90-103.
- Wirtz, B.W., Göttel, V. & Daiser, P. 2017. 'Social networks: Usage intensity and effects on personalized advertising', *Journal of Electronic Commerce Research*, 18(2): 103-123.
- Wu, I., Chen, K. & Chiu, M. 2016. 'Defining key drivers of online impulse purchasing: A perspective of both impulse shoppers and system users', *International Journal of Information Management*, 36(1): 284-296.
- Wu, Y.-L. & Ye, Y.-S. 2013. Understanding impulsive buying behavior in mobile commerce. In: *PACIS 2013 Proceedings*. Jeju Island, South Korea. 142.
- Xi, H., Hong, Z., Jianshan, S., Li, X., Jiuchang, W. & Davison, R. 2016. Impulsive purchase behaviour in social commerce: The role of social influence. In: *PACIS 2016 Proceedings*. Chiayi, Taiwan. 364.
- Xiang, L., Zheng, X., Lee, M.K.O. & Zhao, D. 2016. 'Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction', *International Journal of Information Management*, 36(3): 333-347.
- Zhang, K.Z.K., Xu, H., Zhao, S. & Yu, Y. 2018. 'Online reviews and impulse buying behavior: The role of browsing and impulsiveness', *Internet Research*, 28(3): 522-543.